

# USER MANUAL

---

## Widescreen LCD Display Wide 19", 22" Screen Size



Widescreen LCD Display

**Models**

NPW822

NPW719



Widescreen LCD Drawer

**Models**

NPW119

## 4:3 LCD Display 15", 17", 19", 20" screen size



4:3 LCD Display

**Models**

NP615 / NP717 / NP819 / NP920

SNP717 / SNP 819 / SNP 920



4:3 LCD Display

**Models**

- For Standard  
NP115 / NP117 / NP119 / NP120

- For SUN Solaris  
SNP117 / SNP119 / SNP120

- For Short depth version  
NPS115 / NPS117 / NPS119



**Options:** -BNC + S-Video  
-Audio

- DVI  
- Quad Display

- Touchscreen  
- DC Power

## Contents

Chapter 1	<b>Getting Started</b>	
	1.1 Important Safeguards.....	1
	1.2 Regulatory Notice.....	2
	1.3 Before Installation.....	3
	1.4 Unpacking.....	3
	1.5 Optional Accessories.....	3
	1.6 Peripheral Products.....	4
Part 1	<b>Widescreen LCD Display</b>	
Chapter 2	<b>NPW719 &amp; NPW822</b>	
	2.1 Package Contents.....	5
	2.2 Structure Diagram.....	6
	2.3 Installation.....	7-8
	2.4 Connection.....	9
Chapter 3	<b>NPW119</b>	
	3.1 Package Contents.....	10
	3.2 Structure Diagram.....	11
	3.3 How to Install "One Man" Installation Slides.....	12-13
	3.4 How to Use the Slides.....	14
	3.5 Connection.....	15
Chapter 4	<b>Operation</b>	
	4.1 On-screen Display Operation.....	16
	4.2 On-screen Menu.....	17
Chapter 5	<b>Optional Specifications</b>	
	5.1 DVI-D Option.....	18
	5.2 BNC + S-Video Option.....	19
	5.3 Audio Option.....	20
	5.4 Touchscreen Options.....	21-22
	5.5 Front NEMA / IP65 Option.....	23
	5.6 Quad Display Option.....	24
	5.7 DC Power Options.....	25

## Contents

Part 2	<b>4:3 LCD Display</b>	
Chapter 6	<b>NP615, NP717, NP819 &amp; NP920</b>	
	<b>SNP717, SNP819 &amp; SNP920</b>	
	6.1 Package Contents.....	26
	6.2 Structure Diagram.....	27
	6.3 Installation.....	28-29
	6.4 Connection.....	30
	<b>NP120</b>	
	<b>SNP120</b>	
Chapter 7	<b>NP115, NP117 &amp; NP119</b>	
	<b>SNP117 &amp; SNP119</b>	
	<b>NPS115, NPS117 &amp; NPS119</b>	
	7.1 Package Contents.....	31
	7.2 Structure Diagram.....	32
	7.3 How to Install "One Man" Installation Slides.....	33-34
	7.4 How to Use the Slides.....	33
	7.5 Connection.....	36
Chapter 8	<b>Operation</b>	
	8.1 On-screen Display Operation.....	37
	8.2 On-screen Menu.....	38
Chapter 9	<b>Optional Specification</b>	
	9.1 DVI-D Option.....	39
	9.2 BNC + S-Video Option.....	40
	9.3 Audio Option.....	41-42
	9.4 Touchscreen Options.....	43-44
	9.5 Front NEMA / IP65 Option.....	45
	9.6 Quad Display Option.....	46
	9.7 DC Power Options.....	47
Chapter 10	<b>LCD Specification.....</b>	<b>48-50</b>
Chapter 11	<b>Trouble Shooting.....</b>	<b>51</b>
Chapter 12	<b>Dimensions.....</b>	<b>52-53</b>

## 1.1 Important Safeguards

## Chapter 1

**Please read all of these instructions carefully before you use the device. Save this manual for future reference.**

### **What the warranty does not cover**

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - Repair or attempted repair by anyone not authorized by us.
  - Any damage of the product due to shipment.
  - Removal or installation of the product.
  - Causes external to the product, such as electric power fluctuation or failure.
  - Use of supplies or parts not meeting our specifications.
  - Normal wear and tear.
  - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

## 1.2 Regulatory Notice

## Chapter 1

### Legal Information

First English printing, October 2002

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

### Safety Instructions

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the drawer is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

### Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

## 1.3 Before Installation

## Chapter 1

- It is very important to locate the Rackmount LCD Drawer / Display in a suitable environment.
- The surface for placing and fixing the Rackmount LCD Drawer / Display should be stable and level or mounted into a suitable cabinet.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Convenience for connecting the Rackmount LCD Drawer / Display to the related facilities should be well considered too.

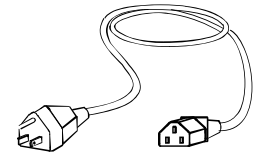
## 1.4 Unpacking

The LCD keyboard drawer comes with the standard parts shown on the package contents. Check and make sure they are included and in good condition. If anything is missing, or damage, contact the supplier immediately.

## 1.5 Optional Accessories

### 1. Power Cord

- 1.1 IEC power cord
- 1.2 NEMA 5-15 power cord (US)
- 1.3 BS 1363 power cord (UK)
- 1.4 CEE 7/4 power cord (German)
- 1.5 AS 3112 power cord (Australia)



## 1.6 Peripheral Products

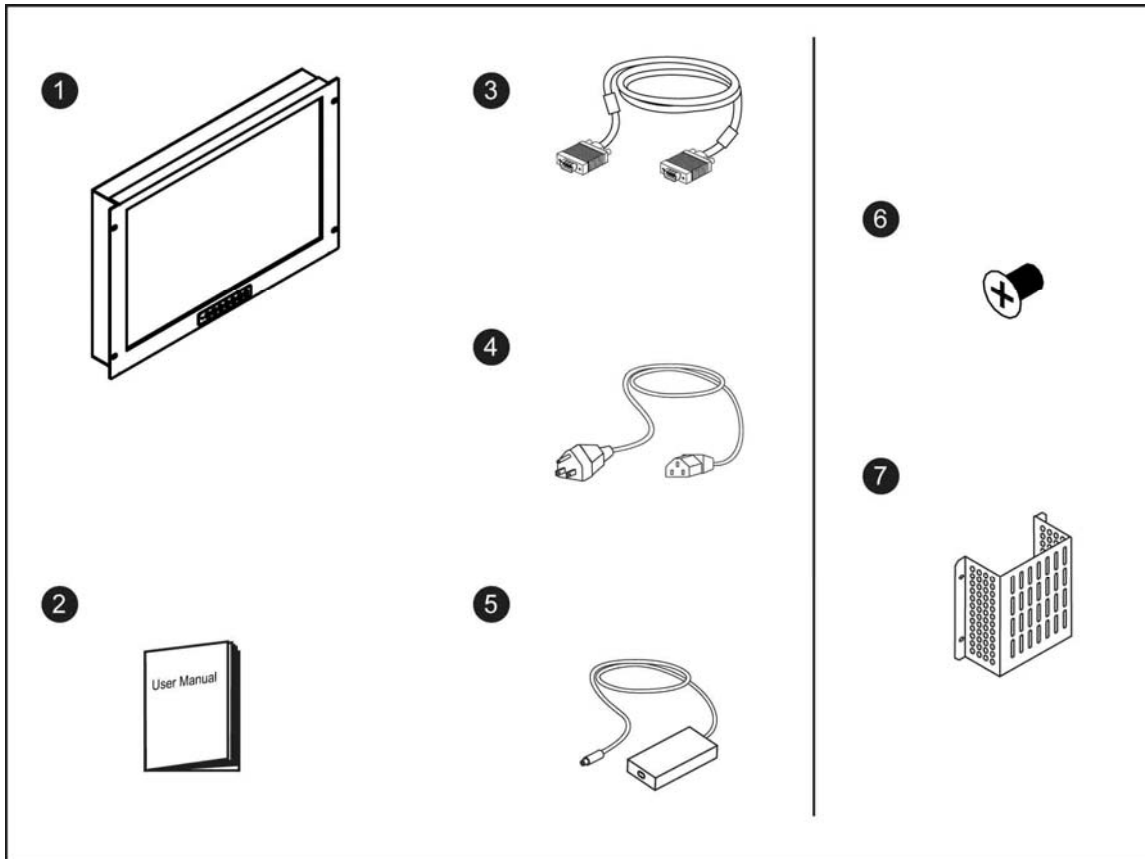
## Chapter 1

Item	Model No.	Description
<b>Matrix Cat6 KVM</b>	MC0116 / MC0216 / MC0316 MC1116 / MC1216 / MC2116 MC0132 / MC0232 / MC0332 MC1132 / MC1232 / MC2132	Matrix Cat6 16 port KVM Matrix IP Cat6 16 port KVM Matrix Cat6 32 port KVM Matrix IP Cat6 32 port KVM
<b>Matrix DB-15 KVM</b>	M018/ M028 / M038 M118 / M128 / M218 M0116 / M0216 / M0316 M1116 / M1216/ M2116	Matrix DB-15 8 port KVM Matrix IP DB-15 8 port KVM Matrix DB-15 16 port KVM Matrix IP DB-15 16 port KVM
<b>Combo Cat6 KVM</b>	NVC800 / NVCCE800 / NVCIP800 NVC1600 / NVCCE1600 / NVCIP1600 NVC3200/ NVCCE3200 / NVCIP3200	Combo Cat6 8 port KVM Combo Cat6 16 port KVM Combo Cat6 32 port KVM
<b>Combo DB-15 KVM</b>	NVS801 / NVCE800 / NVIP-802 NVS1601 / NVCE1600 / NVIP-1602	Combo DB-15 8 port KVM Combo DB-15 16 port KVM
<b>PS/2 DB-15 KVM</b>	NV401A / NV801A / NV1601A	4 / 8 / 16 port PS/2 DB-15 KVM
<b>Keyboard Drawer</b>	NK1 NK2	Rackmount keyboard drawer (with KVM options) Rackmount keyboard drawer (short depth version)

## 2.1 Package Contents

## Chapter 2

### NPW719 & NPW822



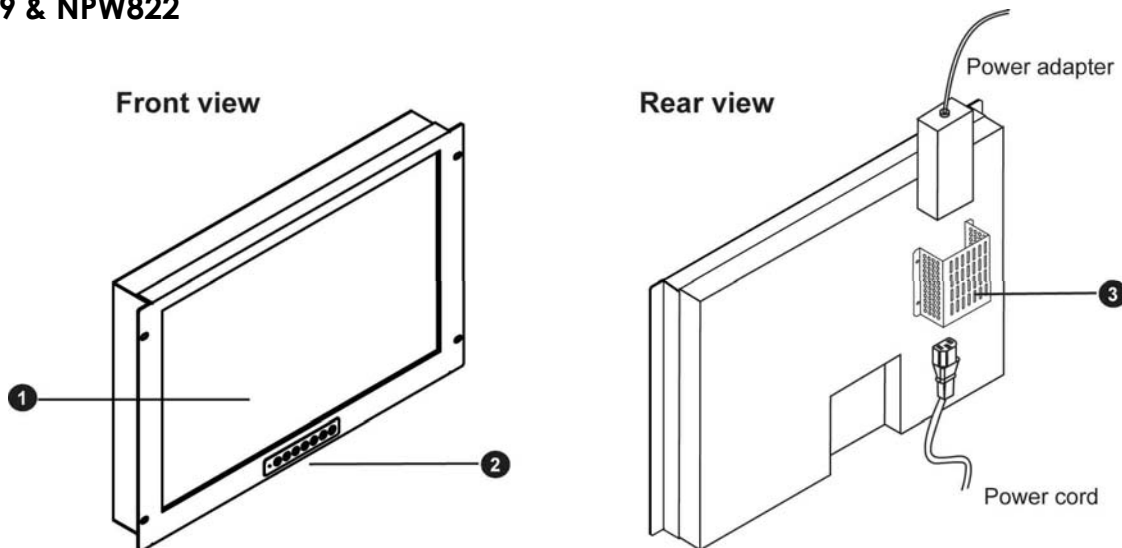
- 1 Rackmount LCD display x 1 pc
- 2 User manual x 1pc
- 3 6' VGA cable (male to male) x 1pc
- 4 Power cord x 1pc
- 5 Auto switch power adapter x 1pc
- 6 M3.2\*4.5mm screw x 4 pcs
- 7 Power adapter bracket x 1 pc



## 2.2 Structure Diagram

## Chapter 2

### NPW719 & NPW822

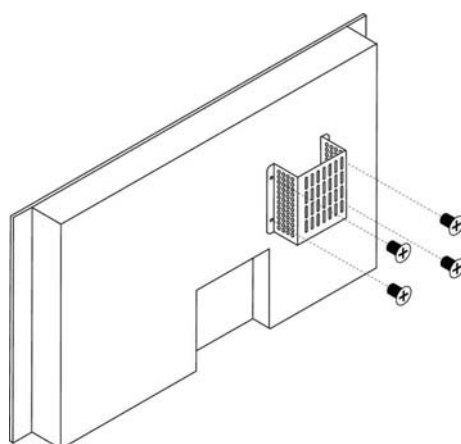


1 LCD interchangeable module kit

2 LCD membrane

3 Power adapter bracket

### Power adapter bracket installation



M3.2\*4.5mm screw x 4 pcs

## 2.3 Installation

## Chapter 2

NPW719

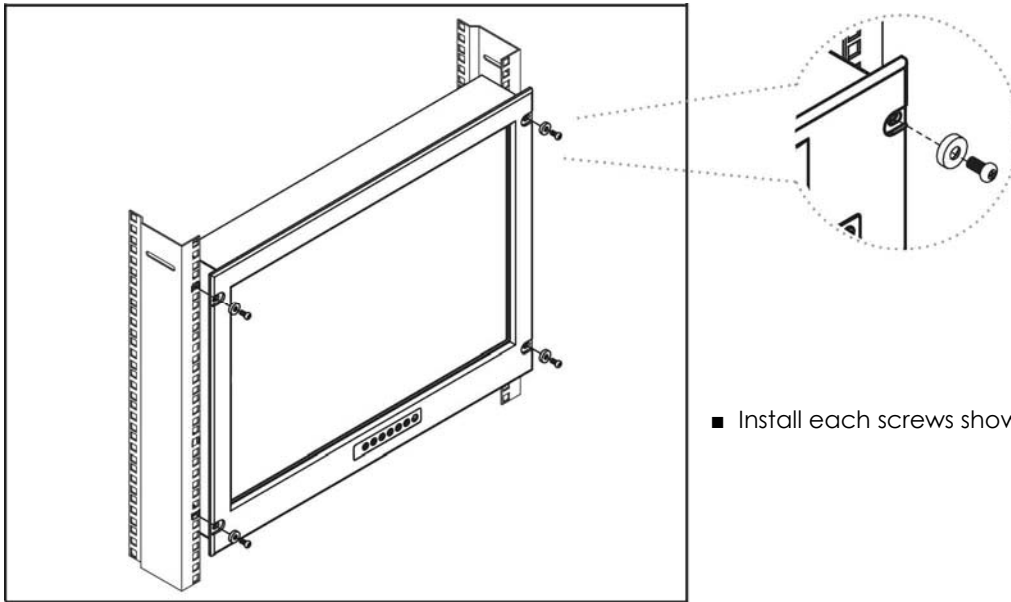


Figure 1.

- Install each screws shown in **Figure 1**.

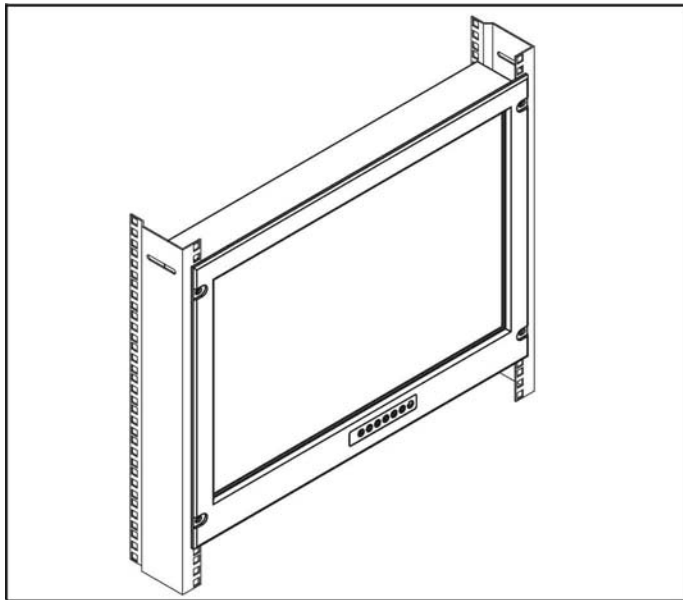


Figure 4.

- Fixed the LCD into the rack.

\* **M6 screws are not provided.**

## 2.3 Installation

## Chapter 2

### NPW719

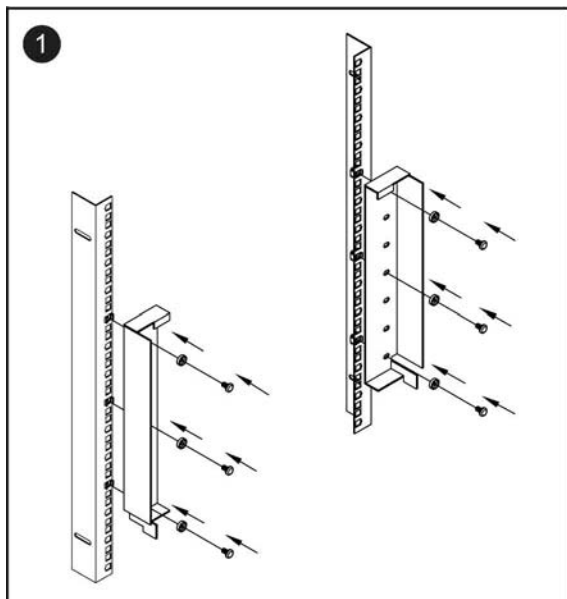


Figure 3.

- Install each screw shown in **Figure 3**.  
\* **M6 screws are not provided.**

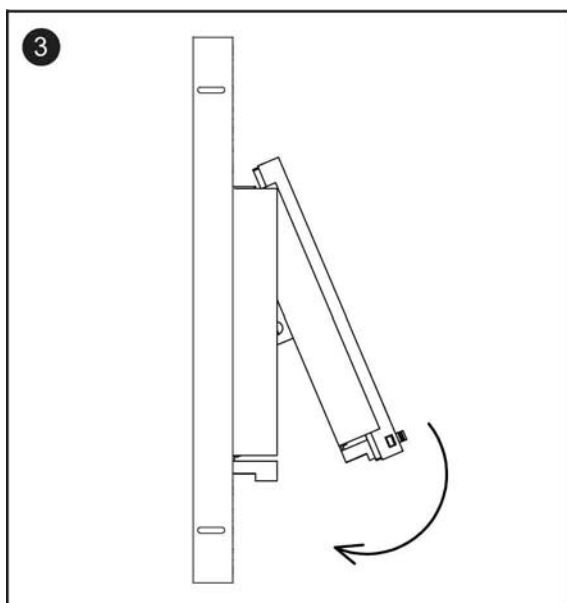


Figure 5.

- Push the lower part of the LCD into the rack.

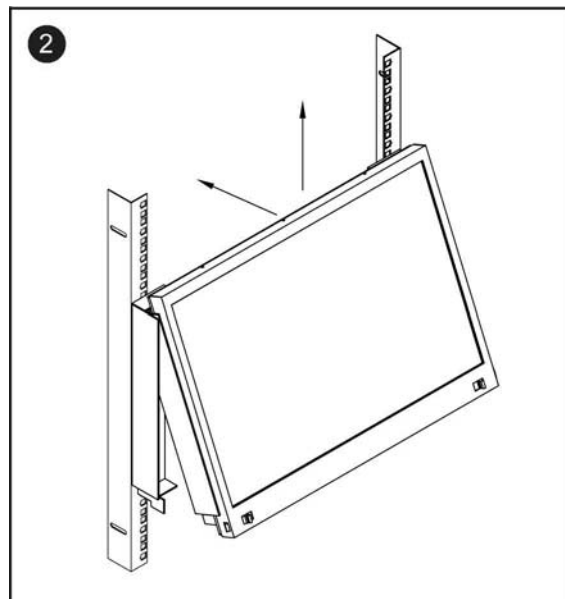


Figure 4.

- Insert the upper part of the LCD display to the rack shown in **Figure 4**.

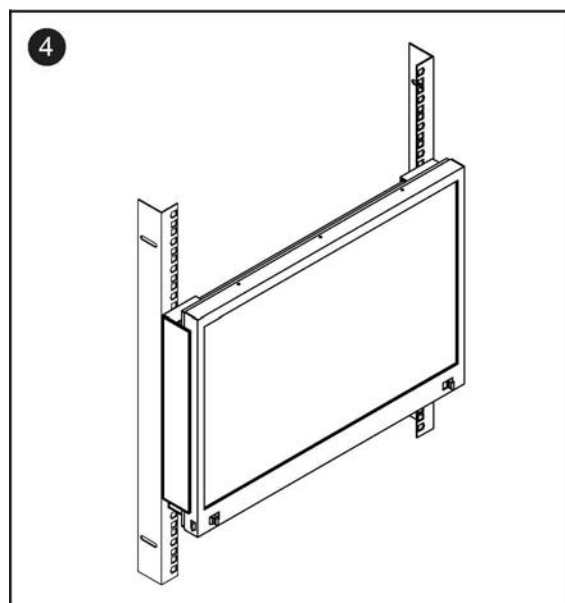


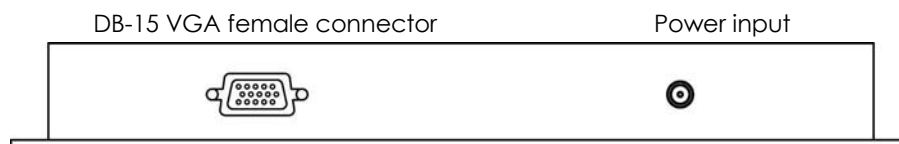
Figure 6.

- Installation completed.

## 2.4 Connection

## Chapter 2

### NPW719 & NPW822

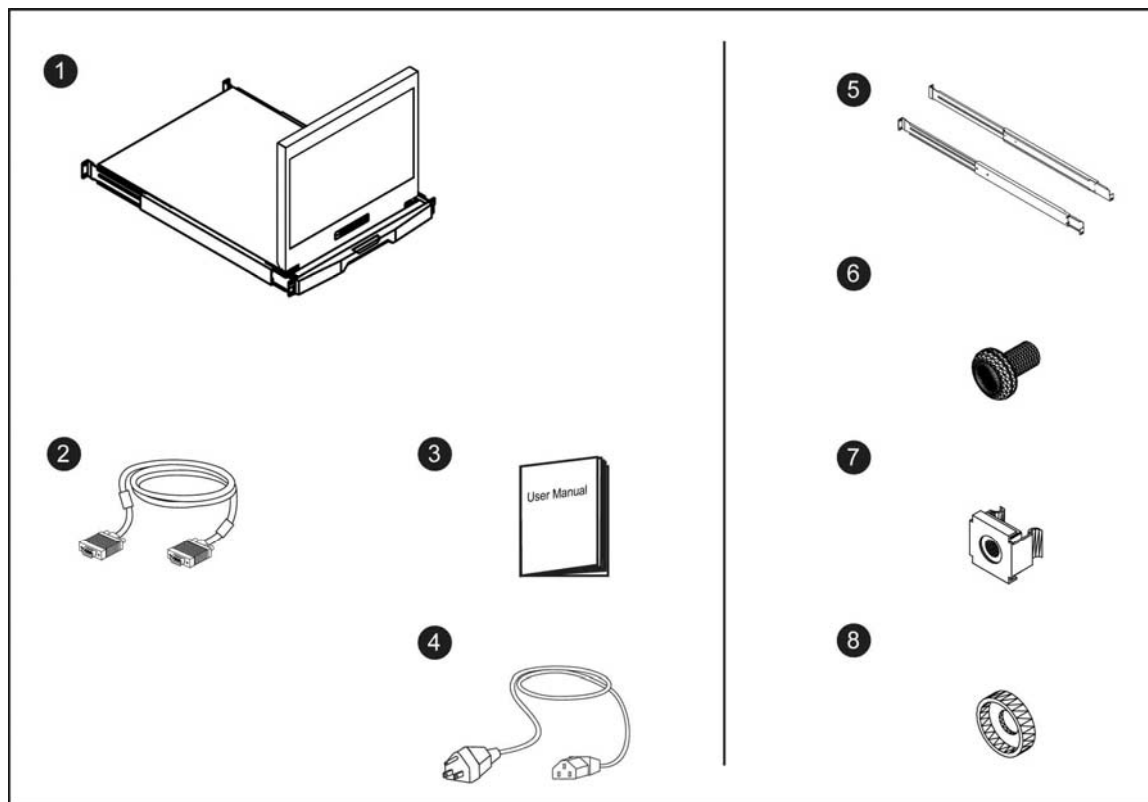


**Caution:** The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer is receiving power. The company is not responsible for damage caused in this way.

## 3.1 Package Contents

## Chapter 3

### NPW119

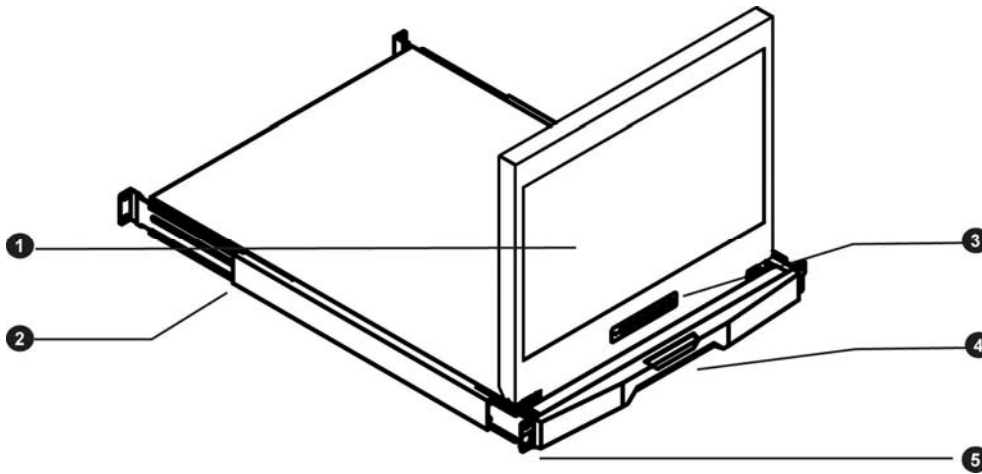


- 1 LCD drawer x 1 pc
- 2 6' VGA cable (male to male) x 1pc
- 3 User manual x 1 pc
- 4 Power cord x 1 pc
- 5 Mounting bracket x 2 pcs
- 6 M6\*15mm screw x 8 pcs
- 7 M6 cage nut x 8 pcs
- 8 Cup washer x 8 pcs

## 3.2 Structure Diagram

## Chapter 3

### NPW119



1 LCD interchangeable module kit

2 "One Man" Installation Slides

3 LCD membrane

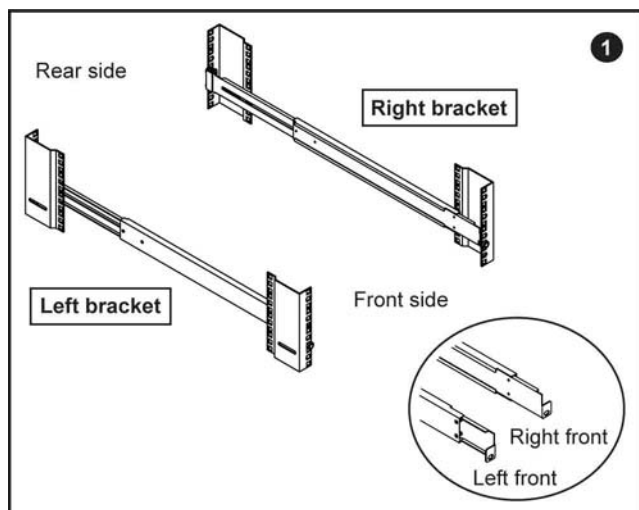
4 Carry handle to release the 2-pt lock

5 2-point lock

### 3.3 How to Install “One Man” Installation Slides

## Chapter 3

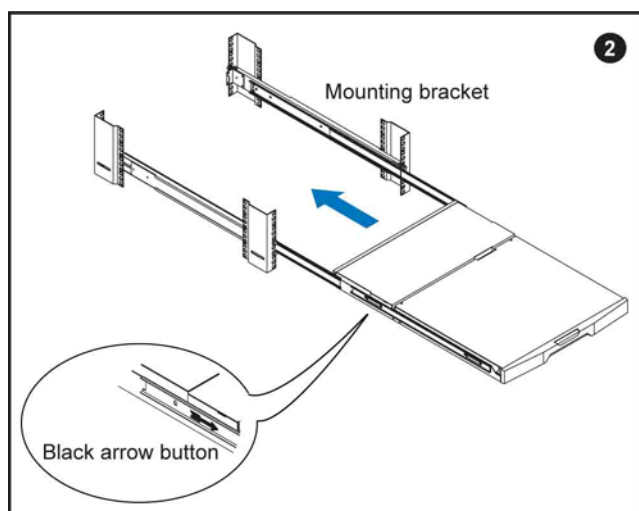
#### Install into rack



- Attach the left and right mounting bracket to rack 19" mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- M6 screw and cup washer x 6 pcs included.



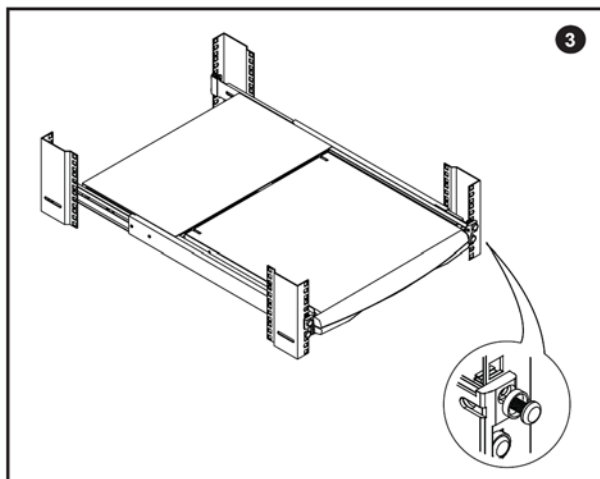
**Caution:** Leaving the screws slightly loose, until you complete the installation in step 4



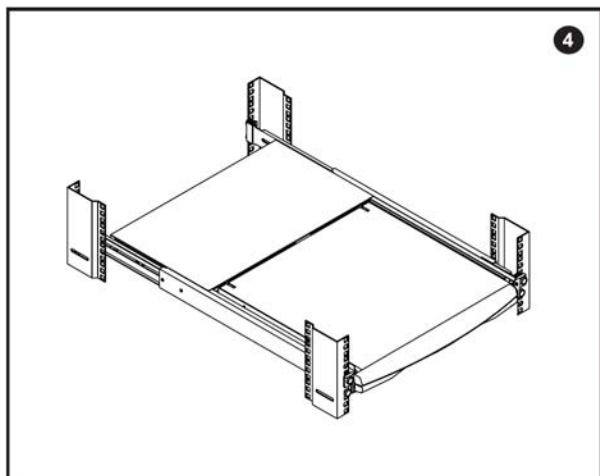
- Pick up the LCD keyboard drawer.
- Insert the LCD keyboard drawer into the mounting bracket.
- Pull and hold the left & right black arrow buttons on the rails.
- Return the LCD keyboard drawer to park position.

### 3.3 How to Install "One Man" Installation Slides

### Chapter 3



- Attach front left and right mounting ears of the LCD keyboard drawer to vertical mounting rails.
- M6 screw and cup washer x 2 pcs included.



#### Complete the installation

- Tighten all 8 pcs of M6 screw to complete the installation.



## 3.4 How to Use the Slides

## Chapter 3

NPW119

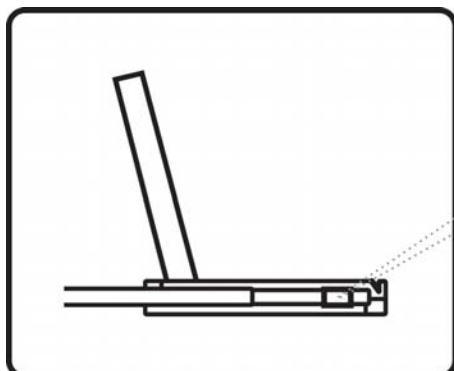
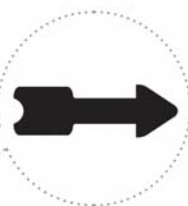


Figure 7



- A black arrow release button is located on the outside of each slide. (shown in **Figure 7**).

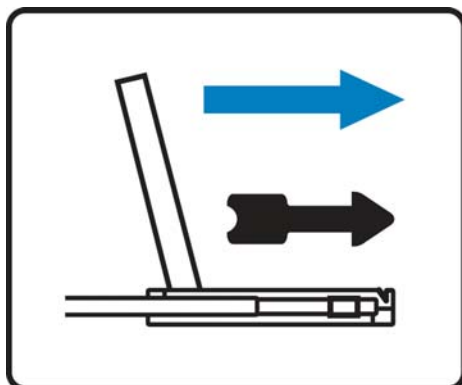


Figure 8

- Pull and hold the black arrow button on either side of the LCD keyboard drawer to unlock. (shown in **Figure 10**).

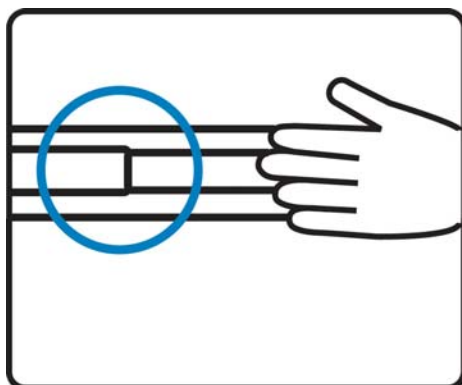


Figure 9

- Push the LCD keyboard drawer into the rack. (shown in **Figure 9**).



**Caution :** Keep your fingers away from the slide top

## 3.4 Connection

## Chapter 3

### NPW119

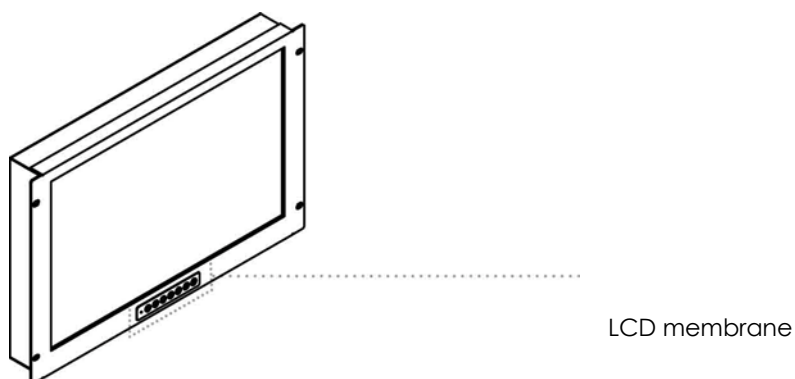


**Caution:** The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer is receiving power. The company is not responsible for damage caused in this way.

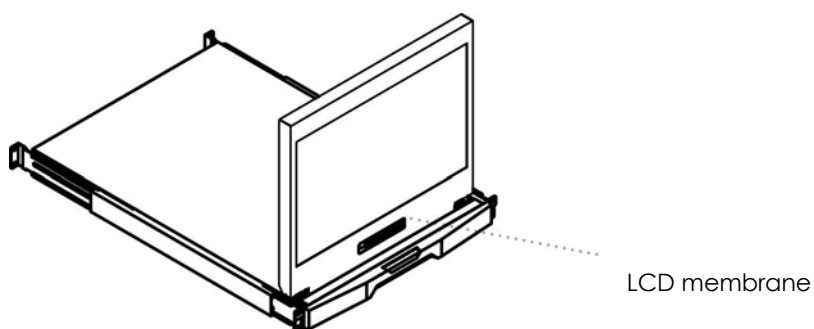
## 4.1 On-screen Display Operation







## Chapter 4

### NPW719 & NPW822



### NPW119

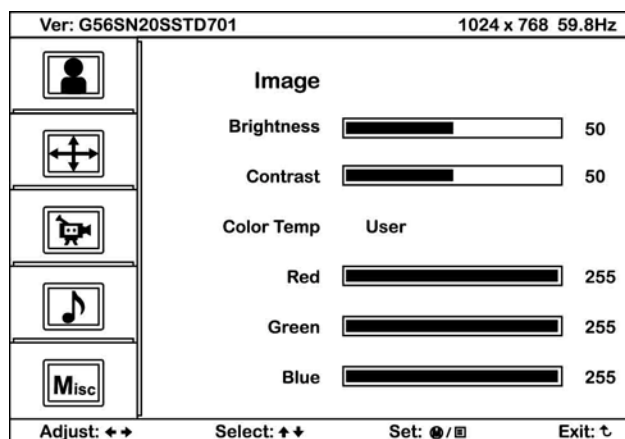


Membrane Switch	Function
	Power light Green = On Orange = Power saving
	Power on / off LCD
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control (To auto adjustment by pressing the button  for 5 seconds)
	Exit the OSD screen Toggle analog, digital & video connection (DVI-D and video options only)


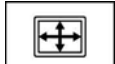



## 4.2 On-screen Menu

## Chapter 4

### NPW719, NPW822 & NPW119



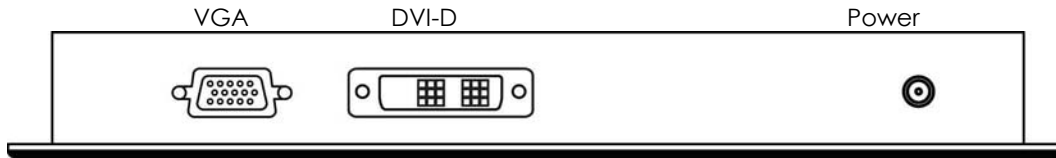
#### OSD Configuration Page

	<b>Image:</b> To enter into the brightness, contrast, colour temp, red, green, and blue
	<b>Geometry:</b> To enter into the auto adjust, H position, V position, phase and clock
	<b>Video:</b> To enter into the colour, tint, sharpness, noise reduction, DCDi and TV Setup
	<b>Audio:</b> To enter into volume, bass, treble, balance, AVL and mute
	<b>Misc:</b> To enter into the language, OSD position, graphic mode, OSD time, ratio, reset and timer

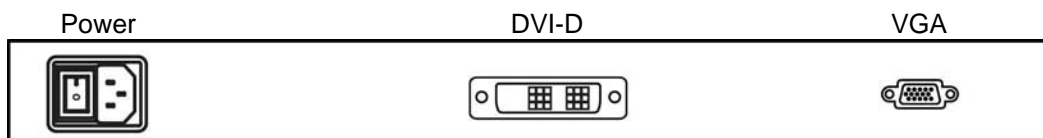
## 5.1 DVI-D Option

## Chapter 5

### NPW719 & NPW822



### NPW119



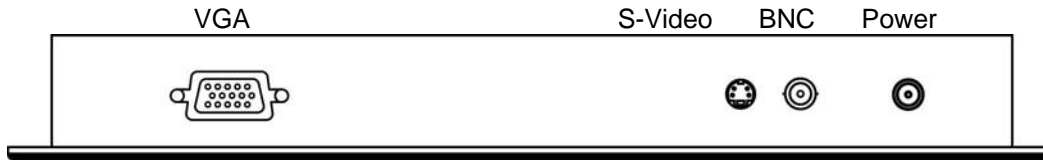
#### Remarks:

- Package includes 1 x 6ft DVI-D cable

## 5.2 BNC + S-Video Option

## Chapter 5

### NPW719 & NPW822



### NPW119



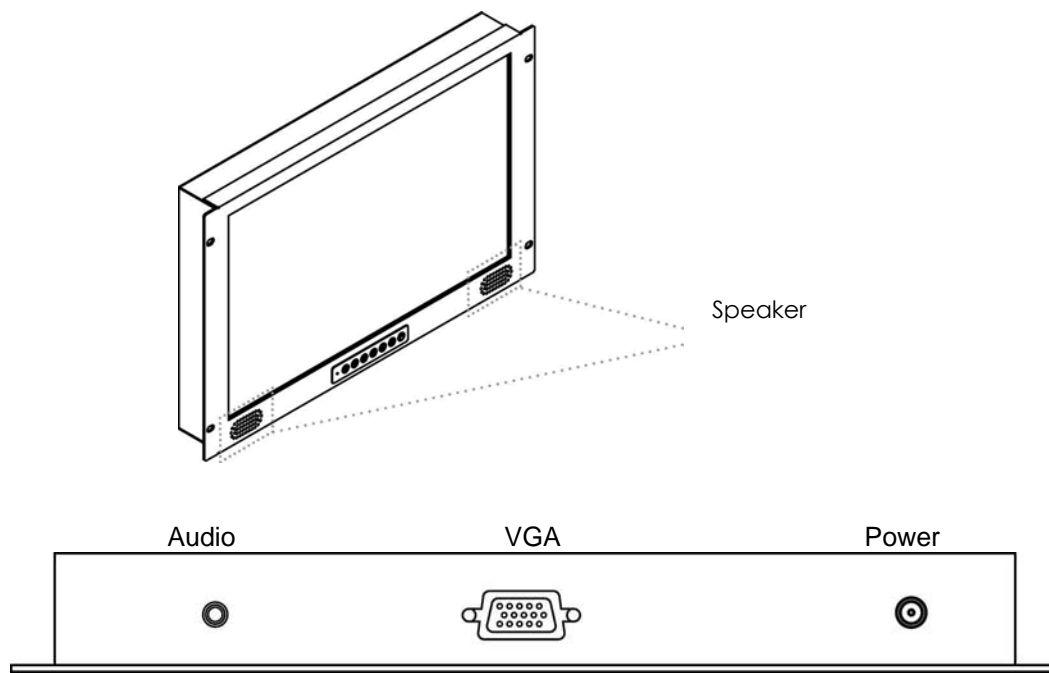
#### Remarks:

- Package includes 1 x 6ft S-Video cable

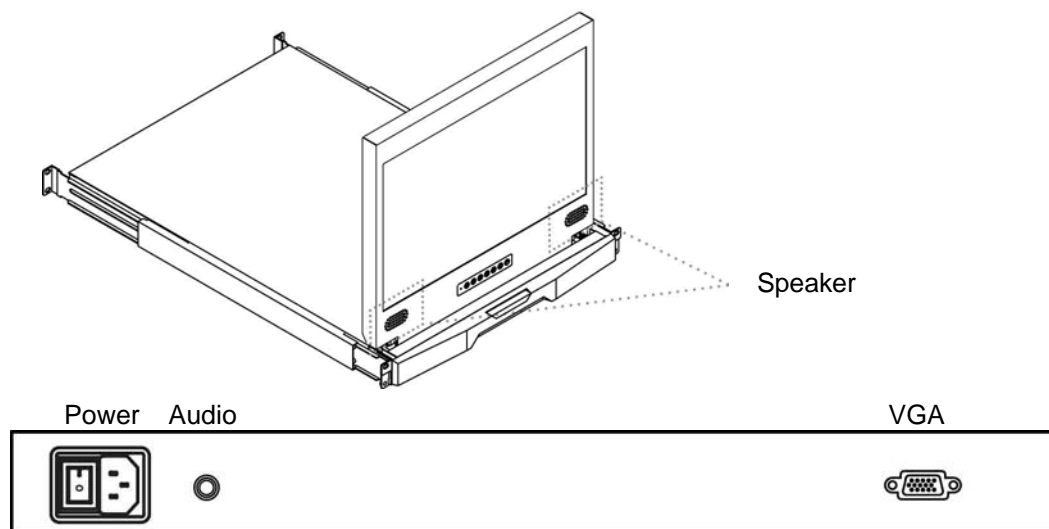
## 5.3 Audio Option

## Chapter 4

### NPW719 & NPW822



### NPW119



#### Remarks:

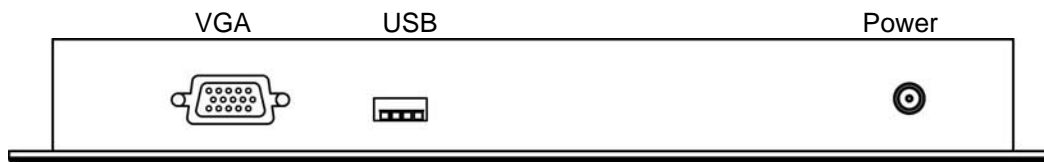
- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

## 5.4 Touchscreen Options

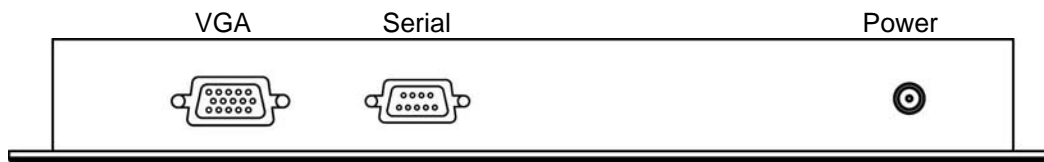


### NPW719 & NPW822

#### USB interface



#### Serial interface





## 5.4 Touchscreen Options



### e-Resistive

Model	-19WTRB / -19WTRS	-22WTRB / -22WTRS
Screen size	19" Wide	22" Wide
Interface	USB / Serial	
Optical transmittance	80%±3%	
Surface hardness	≥3H (JIS K5400)	
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux	

### e-Capacitive

Model	-19WTCB / -19WTCS	-22WTCB / -22WTCS
Screen size	19" Wide	22" Wide
Interface	USB / Serial	
Optical transmittance	93%±2%	
Surface hardness	>9H Surface hardness, withstand over 300 million touches	
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux	

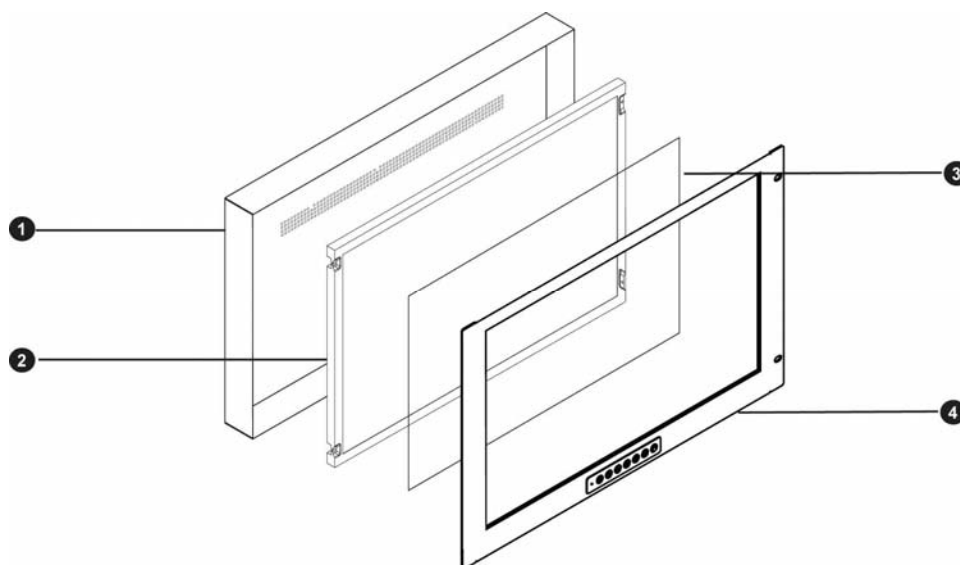
#### Remarks:

- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- Serial touchscreen package includes 1 x 6ft serial cable, quick reference guideline and CD disc
- For detailed information, please refer to the attached CD disc
- As the touchscreen unit is not made of toughened glass, please handle it carefully.
- Touchscreen in other brands are available on request

## 5.5 Front NEMA4 / IP65 Option

## Chapter 5

### NPW719 & NPW822



- 1 Rear case
- 2 LCD panel
- 3 4mm protective glass (Front NEMA 4 / IP65 protection)
- 4 Aluminum front panel

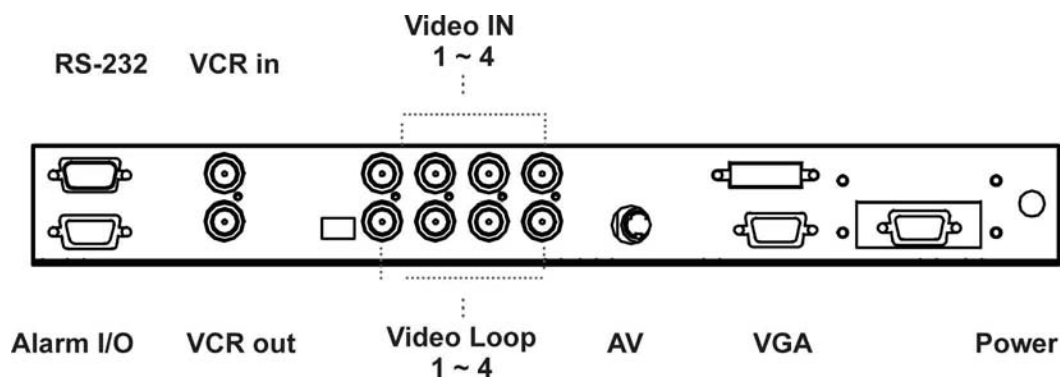
#### Remarks

- 4mm thickness of protective glass is not toughened one, please handle it carefully.

## 5.6 Quad Display Option

## Chapter 5

### Specifications

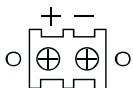


Item		Description
Model Number		QD (NTSC)      QD (PAL)
Number of Color		16.7 M      16.7 M
Imaging System		NTSC      PAL
Resolution		1024 x 525      1024 x 625
Refresh Rate		60      50
Video Input	Camera Input	1.0 Vpp, 75 Ohm x 4
	VCR Input	1.0 Vpp, 75 Ohm x 1
Video Output	Live Monitor	1.0 Vpp, 75 Ohm x 1
	Loop Through Out	1.0 Vpp, 75 Ohm x 4
	VCR Output	1.0 Vpp, 75 Ohm x 1
Auto Gain Control		Yes
Time / Date		Yes
On Screen Display		Yes
Camera Title		8 Character Title
Display Format	2 x Zoom On Playback	Yes
	QUAD	Yes
	FULL	Yes
	SEQUENCY	Yes
Dwell Time		0 to 99 Sec Adjustable
Built-in Buzzer		Yes
Key Lock		Yes

### Remarks

- For more details, please refer to Quad Display User Manual.

## 5.7 DC Power Options

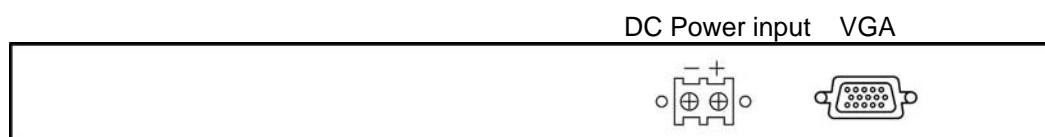


## Chapter 5

## NPW719 &amp; NPW822



## NPW119



Model	12V	24V	48V
<b>Input rating</b>			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V
Input current			
- No load	50 mA	50 mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
<b>Output rating</b>			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
<b>Efficiency</b>	84%	85%	85%

**Remarks:**

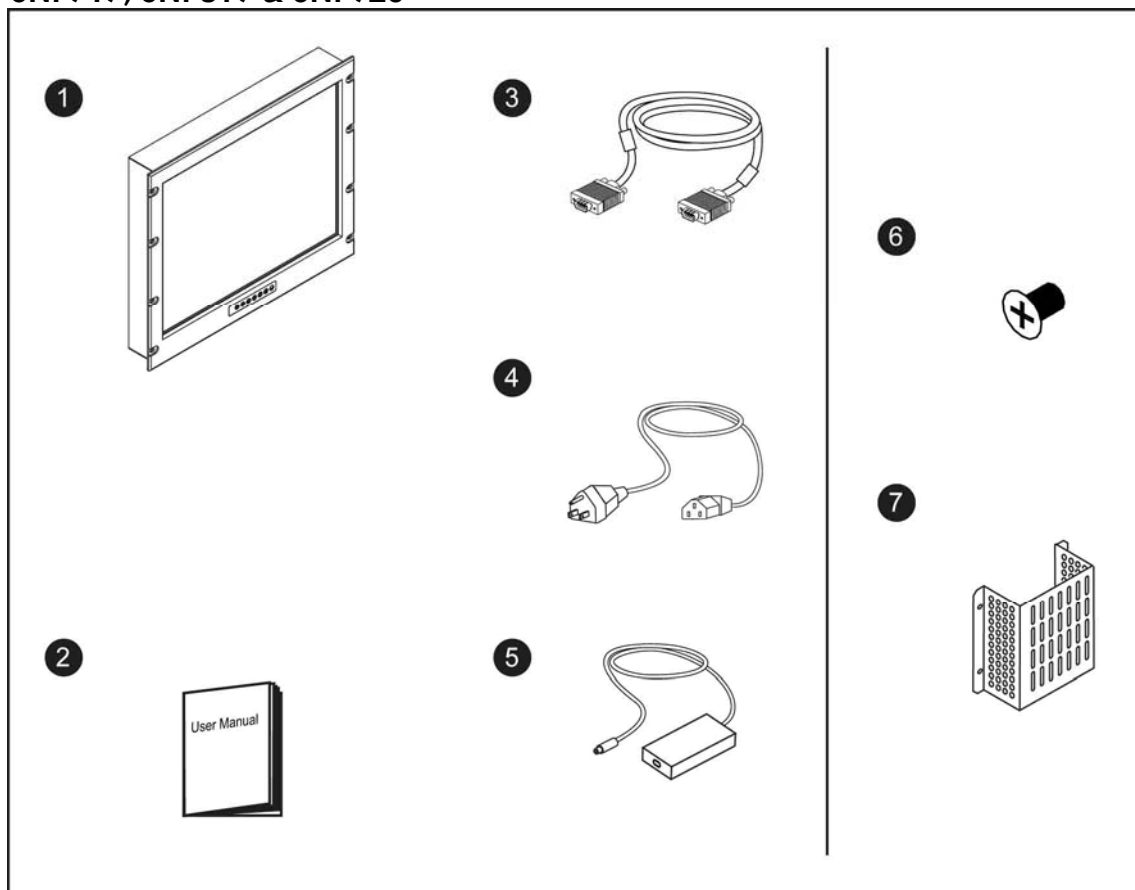
- Package does not include 1 x power cord and 1 x AC power adapter

## 6.1 Package Contents

## Chapter 6

NP615, NP717, NP819 & NP920

SNP717, SNP819 & SNP920

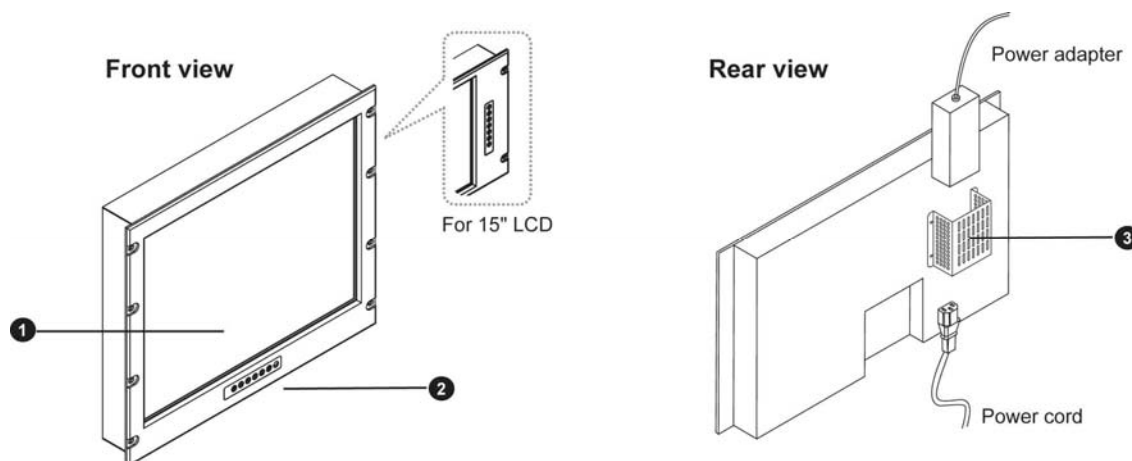


- 1 Rackmount LCD display x 1 pc
- 2 User manual x 1pc
- 3 6' VGA cable (male to male) x 1pc
- 4 Power cord x 1pc
- 5 Auto switch power adapter x 1pc
- 6 M3.2\*4.5mm screw x 4 pcs
- 7 Power adapter bracket x 1 pc

## 6.2 Structure Diagram

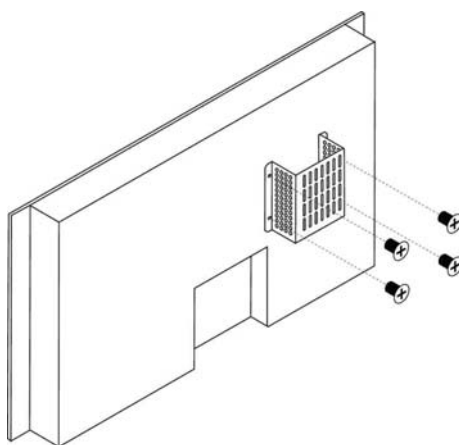
## Chapter 6

NP615, NP717, NP819 & NP920  
SNP717, SNP819 & SNP920



- 1 LCD interchangeable module kit
- 2 LCD membrane
- 3 Power adapter bracket

### Power adapter bracket installation



M3.2\*4.5mm screw x 4 pcs

## 6.3 Installation

## Chapter 6

NP615, NP717, NP819 & NP920  
SNP717 & SNP819

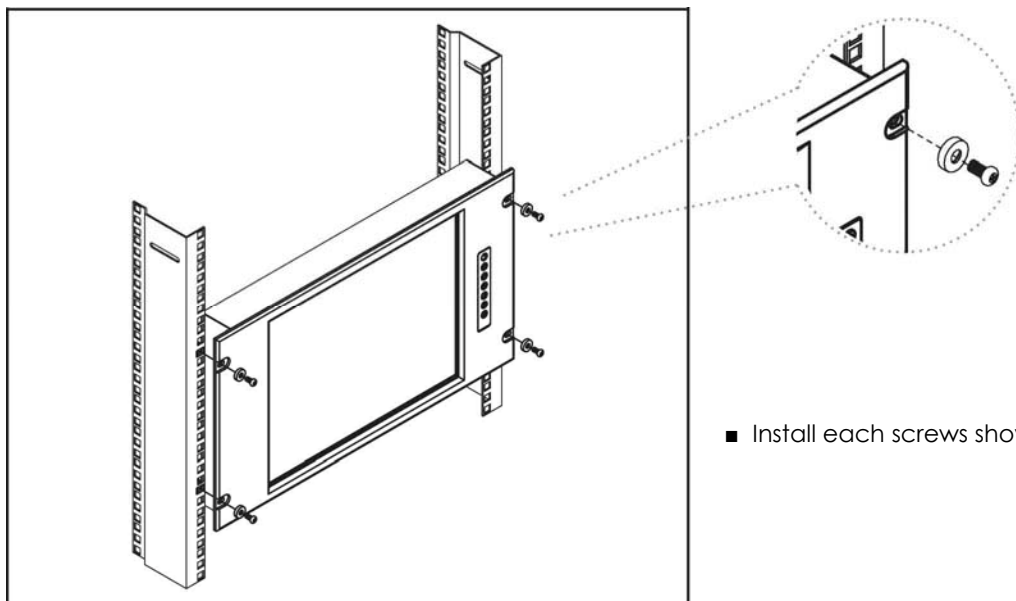


Figure 10.

- Install each screws shown in **Figure 10**.

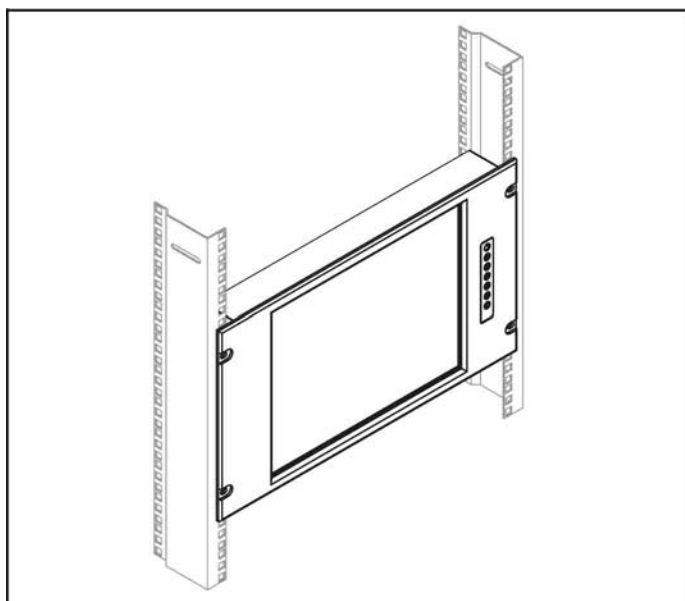


Figure 11.

- Fixed the LCD into the rack.

\* **M6 screws are not provided.**

## 6.3 Installation

## Chapter 6

### NP920 & SNP920

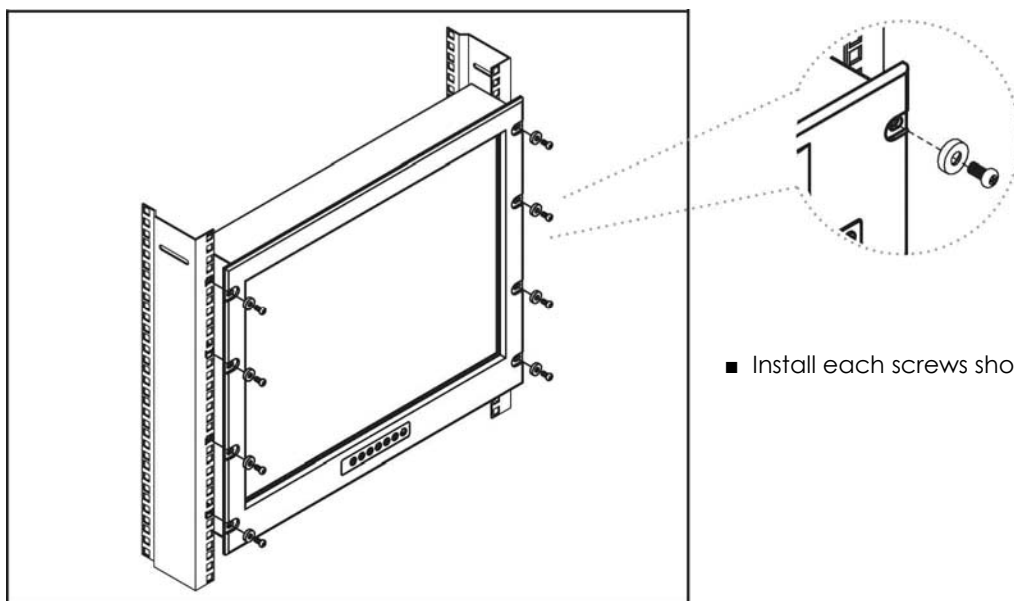


Figure 12.

- Install each screws shown in **Figure 12**.

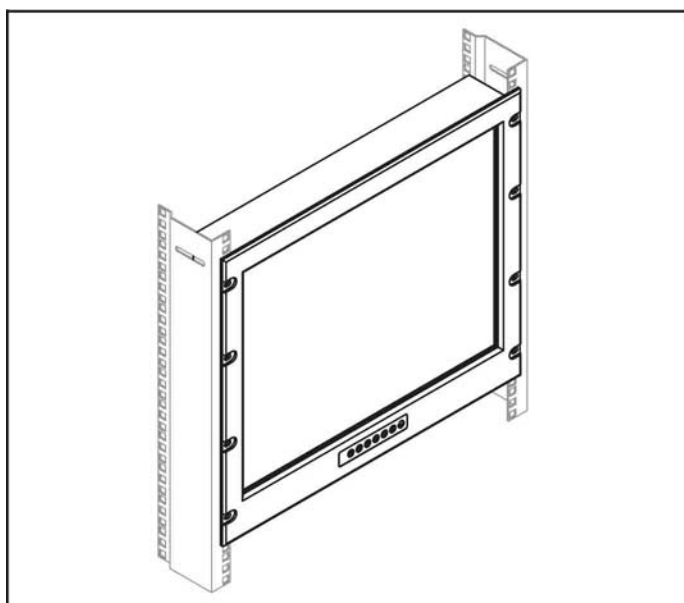


Figure 13.

- Fixed the LCD into the rack.

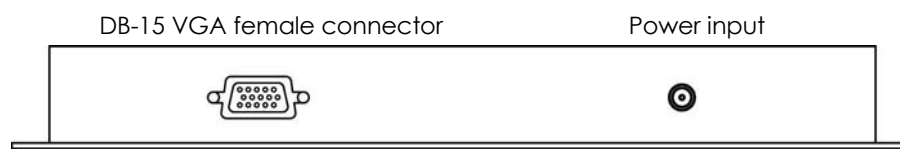
\* **M6 screws are not provided.**



## 6.4 Connection

## Chapter 6

**NP615, NP717, NP819 & NP920**  
**SNP717, SNP819 & SNP920**



**Caution:** The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer is receiving power. The company is not responsible for damage caused in this way.

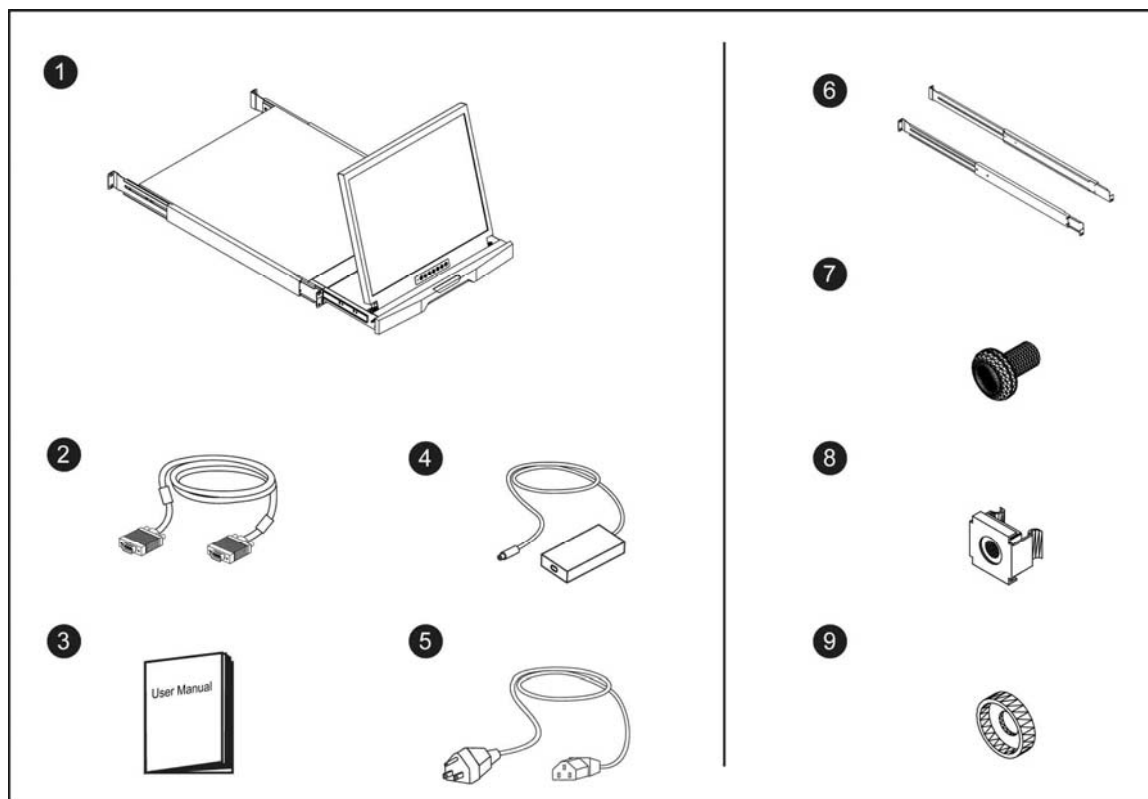
## 7.1 Package Contents

## Chapter 7

### NP120 & SNP120

### NP115, NP117, NP119, SNP117 & SNP119

### NPS115, NPS117 & NPS119



- 1 LCD drawer x 1 pc
- 2 6' VGA cable (male to male) x 1pc
- 3 User manual x 1 pc
- 4 Auto switch power adapter ( for external power version) x 1pc
- 5 Power cord x 1pc
- 6 Mounting bracket x 2 pcs
- 7 M6\*15mm screw x 8 pcs
- 8 M6 cage nut x 8 pcs
- 9 Cup washer x 8 pcs

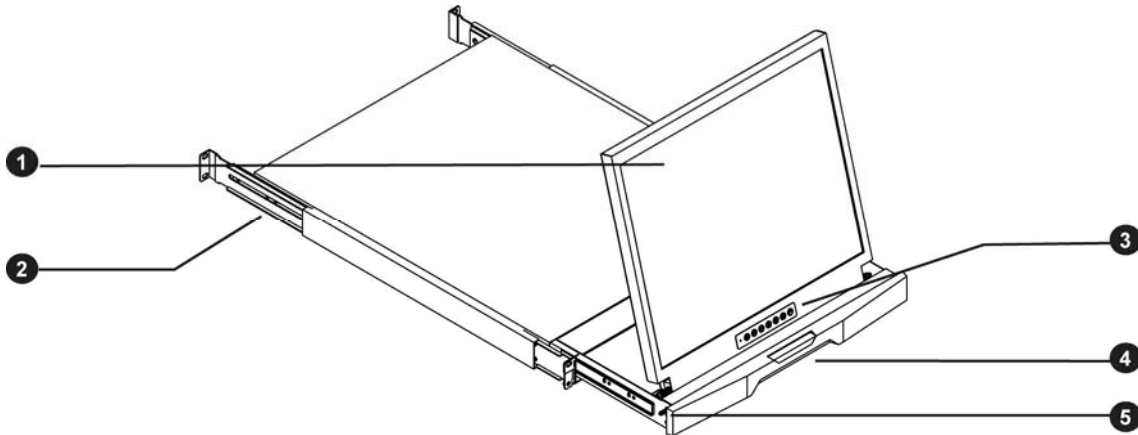
## 7.2 Structure Diagram

## Chapter 7

**NP120 & SNP120**

**NP115, NP117, NP119, SNP117 & SNP119**

**NPS115, NPS117 & NPS119**



**1** LCD interchangeable module kit

**2** "One Man" Installation Slides

**3** LCD membrane

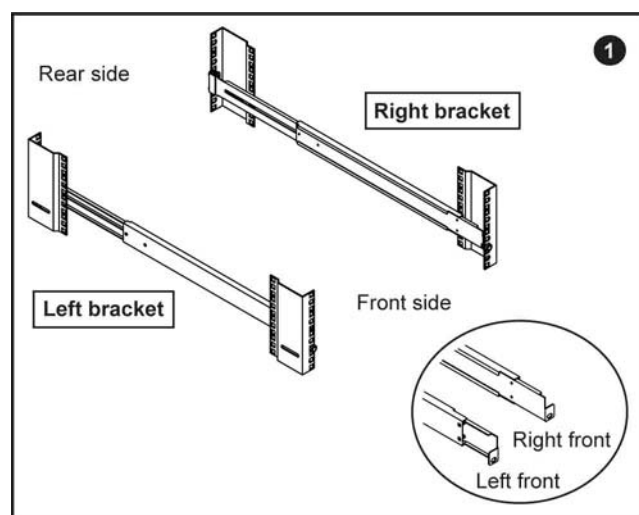
**4** Carry handle to release the 2-pt lock

**5** 2-point lock

## 7.3 How to Install "One Man" Installation Slides

## Chapter 7

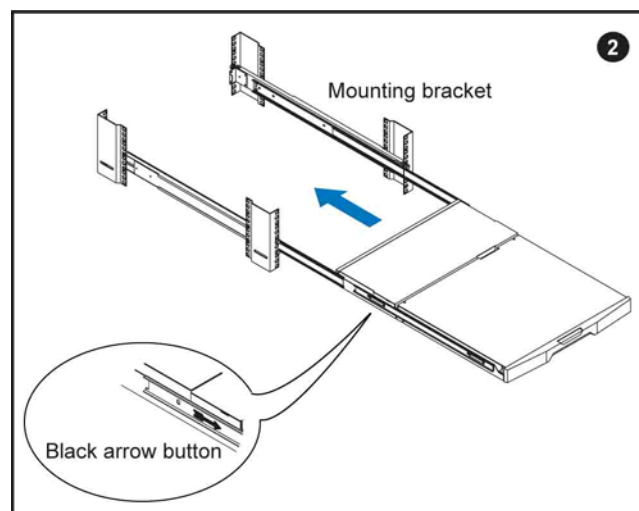
### Install into rack



- Attach the left and right mounting bracket to rack 19" mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- M6 screw and cup washer x 6 pcs included.



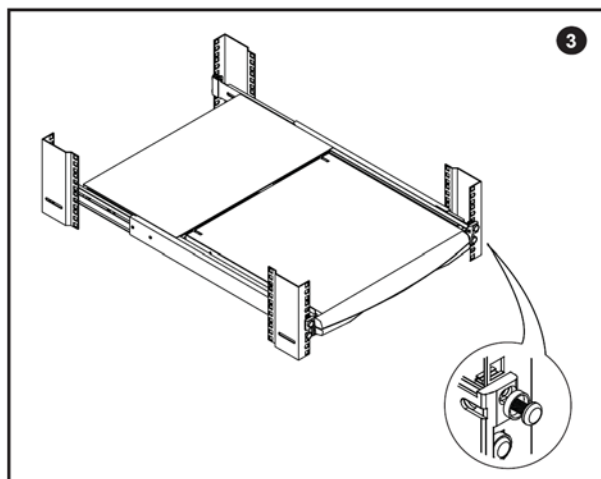
**Caution:** Leaving the screws slightly loose, until you complete the installation in step 4



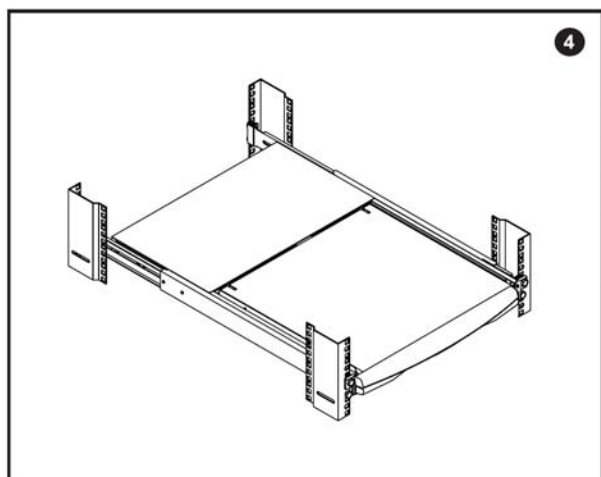
- Pick up the LCD keyboard drawer.
- Insert the LCD keyboard drawer into the mounting bracket.
- Pull and hold the left & right black arrow buttons on the rails.
- Return the LCD keyboard drawer to park position.

## 7.3 How to Install "One Man" Installation Slides

## Chapter 7



- Attach front left and right mounting ears of the LCD keyboard drawer to vertical mounting rails.
- M6 screw and cup washer x 2 pcs included.



### Complete the installation

- Tighten all 8 pcs of M6 screw to complete the installation.

## 7.4 How to Use the Slides

## Chapter 7

NP120 & SNP120

NP115, NP117, NP119, SNP117 & SNP119

NPS115, NPS117 & NPS119

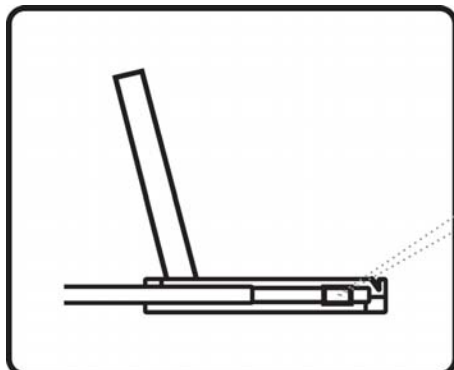


Figure 14

- A black arrow release button is located on the outside of each slide. (shown in **Figure 14**).

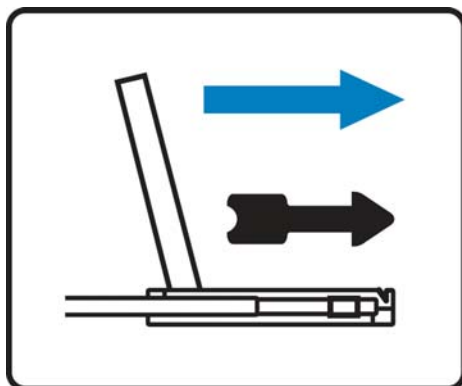


Figure 15

- Pull and hold the black arrow button on either side of the LCD keyboard drawer to unlock. (shown in **Figure 15**).

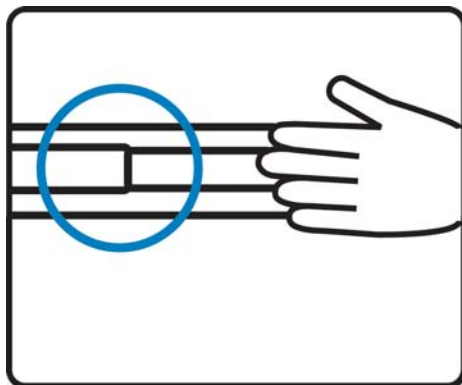


Figure 16

- Push the LCD keyboard drawer into the rack. (shown in **Figure 16**).



**Caution :** Keep your fingers away from the slide top

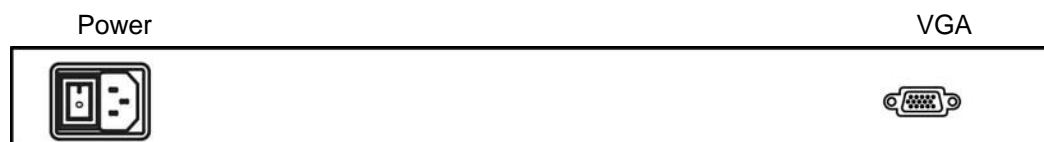
## 7.5 Connection

## Chapter 7

### NP120 & SNP120

### NP115, NP117, NP119, SNP117 & SNP119

Internal power version



External power version ( For short depth version - NPS115 / 1417 / 1419 )



**Caution:** The Rackmount LCD Drawer & Display are hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and Rackmount LCD Drawer. Before attempting to connect anything to the Rackmount LCD Drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the Rackmount LCD Drawer is receiving power. The company is not responsible for damage caused in this way.

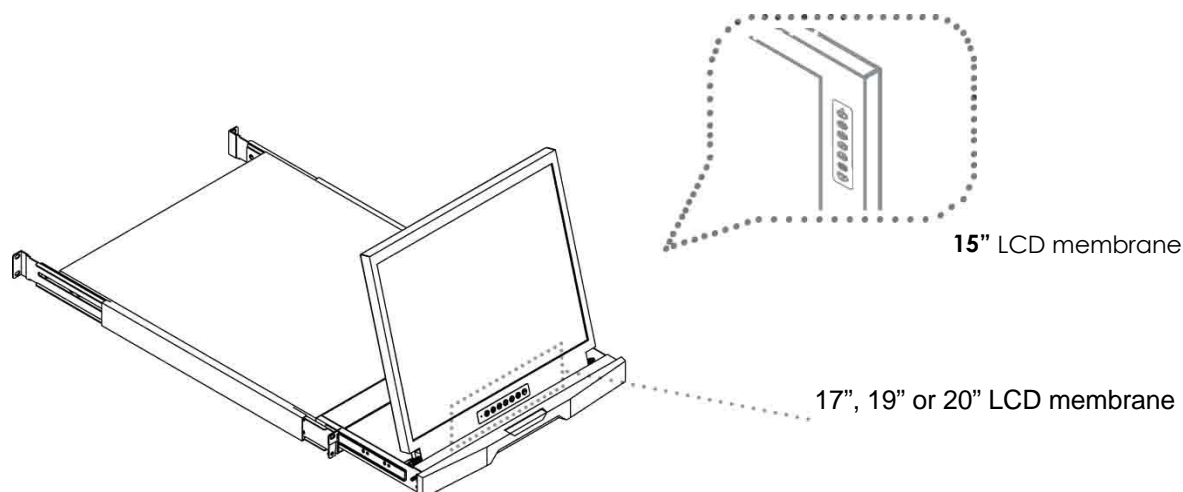
## 8.1 On-screen Display Operation









## Chapter 8

NP120 & SNP120

NP115, NP117, NP119, SNP117 & SNP119

NPS115, NPS117 & NPS119



Membrane Switch	Function
  	Power light Green = On Orange = Power saving
	Power on / off LCD
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control (To auto adjustment by pressing the button  for 5 seconds)
	Exit the OSD screen Toggle analog, digital & video connection (DVI-D and video options only)



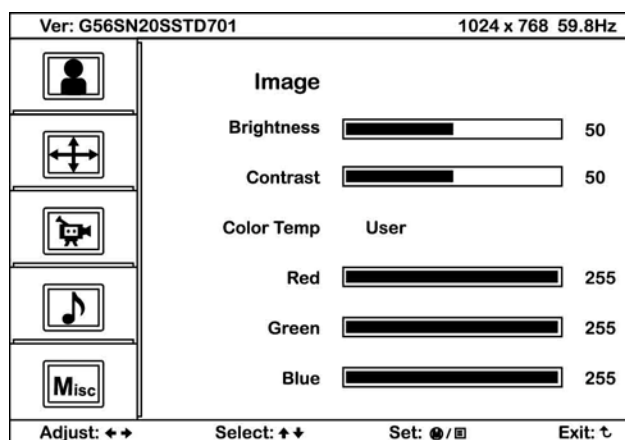
## 8.2 On-screen Menu

## Chapter 8

NP120 & SNP120

NP115, NP117, NP119, SNP117 & SNP119

NPS115, NPS117 & NPS119



### OSD Configuration Page

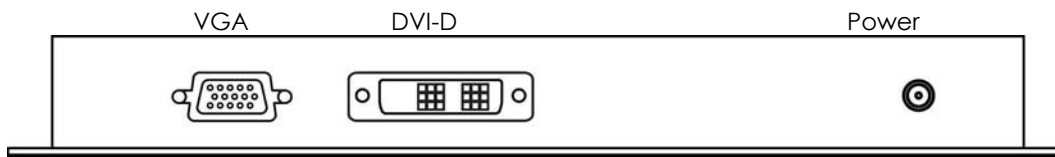
	<b>Image:</b> To enter into the brightness, contrast, colour temp, red, green, and blue
	<b>Geometry:</b> To enter into the auto adjust, H position, V position, phase and clock
	<b>Video:</b> To enter into the colour, tint, sharpness, noise reduction, DCDi and TV Setup
	<b>Audio:</b> To enter into volume, bass, treble, balance, AVL and mute
	<b>Misc:</b> To enter into the language, OSD position, graphic mode, OSD time, ratio, reset and timer

## 9.1 DVI-D Option

## Chapter 9

**NP615, NP717, NP819 & NP920**

**SNP717, SNP819 & SNP920**



**Remarks:**

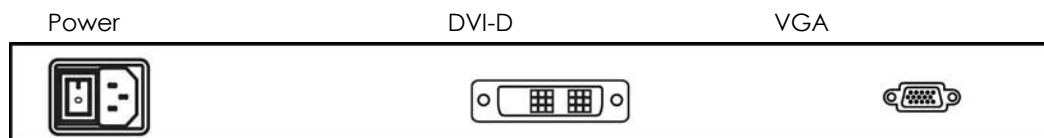
- Package includes 1 x 6ft DVI-D cable

**NP120 & SNP120**

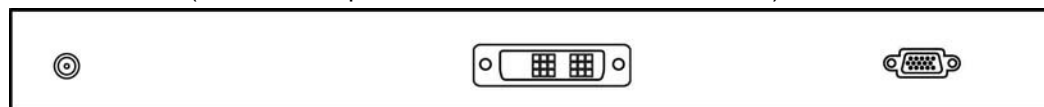
**NP115, NP117, NP119, SNP117 & SNP119**

**NPS115, NPS117 & NPS119**

Internal power version



External power version ( For short depth version - NPS115 / 1417 / 1419 )



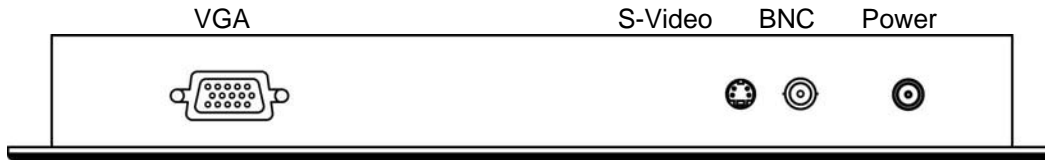
**Remarks:**

- Package includes 1 x 6ft DVI-D cable
- The depth of NPS115 / 1417 / 1419 will be extended from 480mm ( 18.9" ) to 530mm ( 20.9" )

## 9.2 BNC + S-Video Option

## Chapter 9

**NP615, NP717, NP819 & NP920**

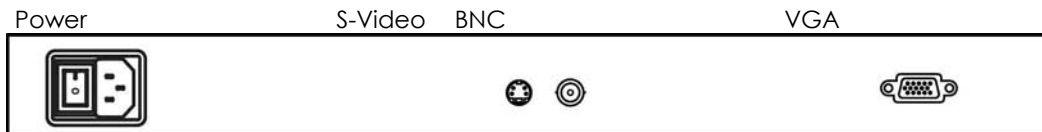


**NP120**

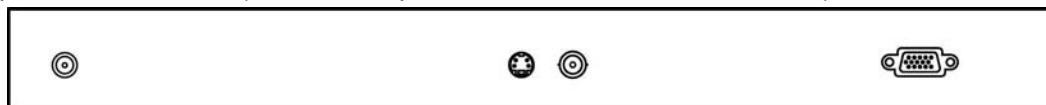
**NP115, NP117 & NP119**

**NPS115, NPS117 & NPS119**

Internal power version



External power version ( For short depth version - NPS115 / 1417 / 1419 )



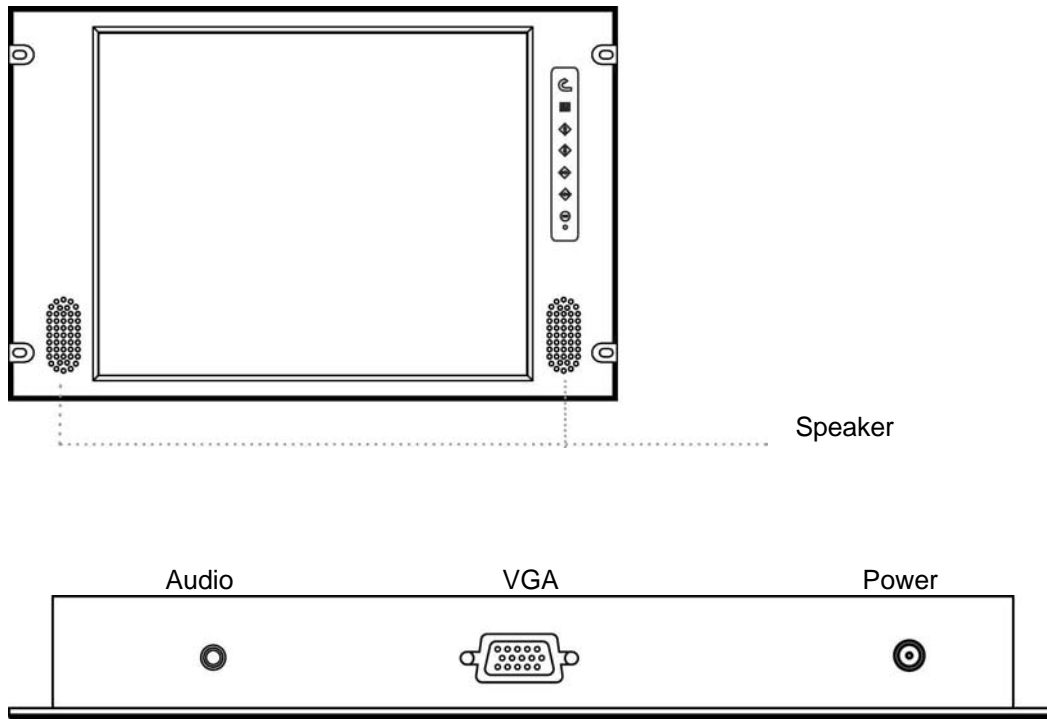
### Remarks:

- Package includes 1 x 6ft S-Video cable

## 9.3 Audio Option

## Chapter 9

NP615, NP717, NP819 & NP920



**Remarks:**

- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

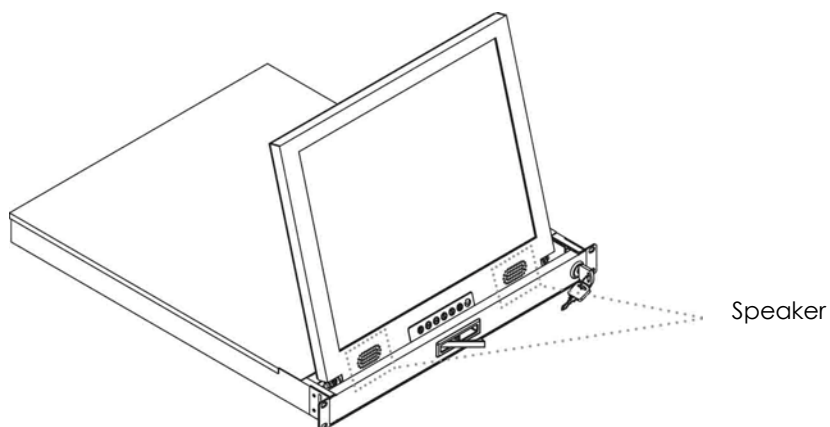
## 9.3 Audio Option

## Chapter 9

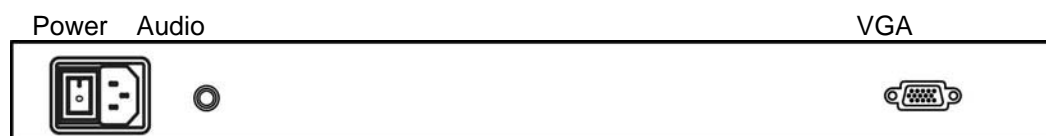
**NP120**

**NP115, NP117 & NP119**

**NPS115, NPS117 & NPS119**



Internal power version



External power version ( For short depth version - NPS115 / 1417 / 1419 )



**Remarks:**

- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

## 9.4 Touchscreen Options



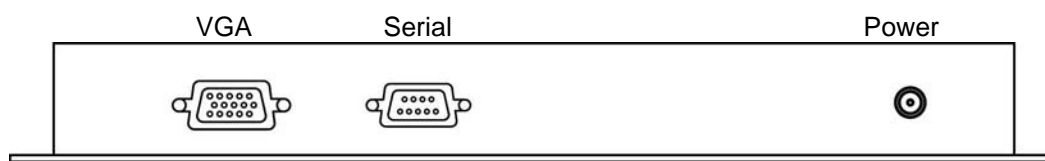
## Chapter 9

### NP615, NP717, NP819 & NP920

#### USB interface



#### Serial interface

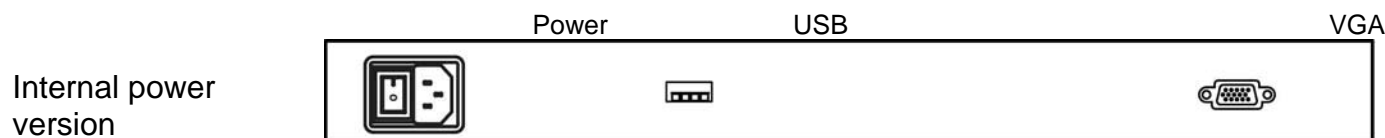


### NP120

### NP115, NP117 & NP119

### NPS115, NPS117 & NPS119

#### USB interface



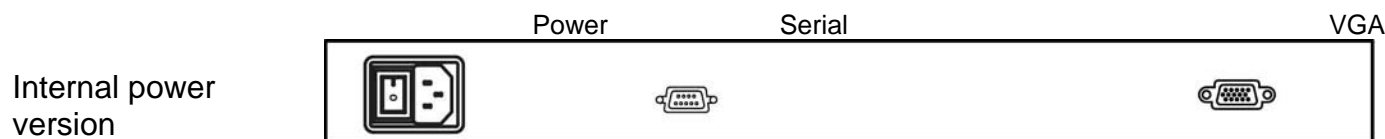
Internal power version

( For short depth version - NPS115 / 1417 / 1419 )

External power version



#### Serial interface



Internal power version

( For short depth version - NPS115 / 1417 / 1419 )

External power version



## 9.4 Touchscreen Options



### e-Resistive

Model	-15TRB / -15TRS	-17TRB / -17TRS	-19TRB / -19TRS	-20TRB / -20TRS
Screen size	15"	17"	19"	20"
Interface	USB / Serial			
Optical transmittance	80%±3%			
Surface hardness	≥3H (JIS K5400)			
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux			

### e-Capacitive

Model	-15TCB / -15TCS	-17TCB / -17TCS	-19TCB / -19TCS	-20TCB / -20TCS
Screen size	15"	17"	19"	20"
Interface	USB / Serial			
Optical transmittance	93%±2%			
Surface hardness	>9H Surface hardness, withstand over 300 million touches			
Operating system	Windows 98 / 2000 / ME / XP / NT / CE, DOS, Linux			

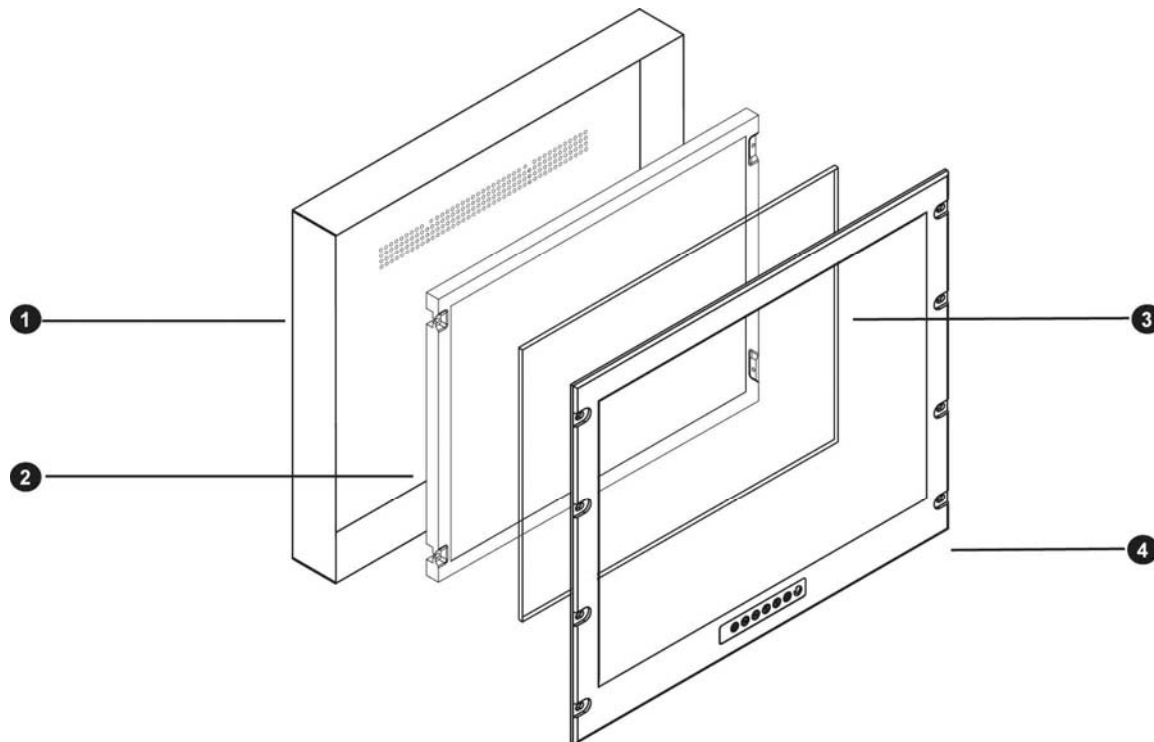
#### Remarks:

- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- Serial touchscreen package includes 1 x 6ft serial cable, quick reference guideline and CD disc
- For detailed information, please refer to the attached CD disc
- As the touchscreen unit is not made of toughened glass, please handle it carefully.
- Touchscreen in other brands are available on request

## 9.5 Front NEMA4 / IP65 Option

## Chapter 9

### NP615, NP717, NP819 & NP920



- 1 Rear case
- 2 LCD panel
- 3 4mm protective glass (Front NEMA 4 / IP65 protection)
- 4 Aluminum front panel

#### Remarks

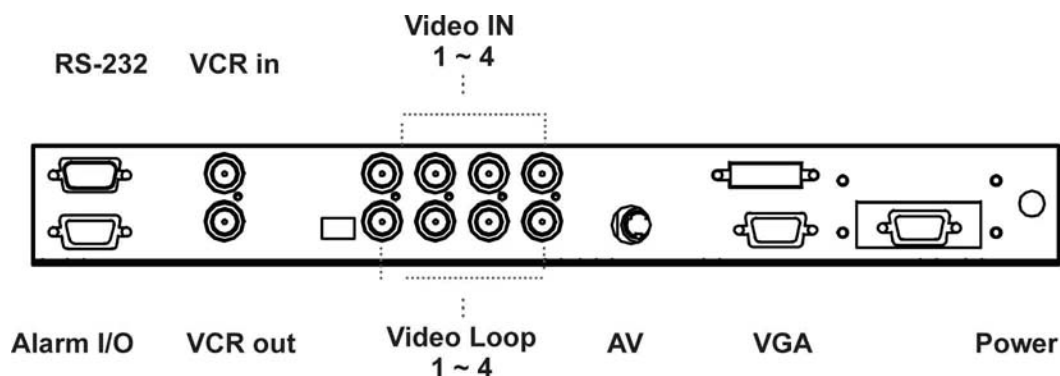
- 4mm thickness of protective glass is not toughened one, please handle it carefully.



## 9.6 Quad Display Option

## Chapter 9

### Specifications

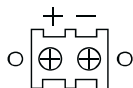


Item		Description
Model Number		QD (NTSC)      QD (PAL)
Number of Color		16.7 M      16.7 M
Imaging System		NTSC      PAL
Resolution		1024 x 525      1024 x 625
Refresh Rate		60      50
Video Input	Camera Input	1.0 Vpp, 75 Ohm x 4
	VCR Input	1.0 Vpp, 75 Ohm x 1
Video Output	Live Monitor	1.0 Vpp, 75 Ohm x 1
	Loop Through Out	1.0 Vpp, 75 Ohm x 4
	VCR Output	1.0 Vpp, 75 Ohm x 1
Auto Gain Control		Yes
Time / Date		Yes
On Screen Display		Yes
Camera Title		8 Character Title
Display Format	2 x Zoom On Playback	Yes
	QUAD	Yes
	FULL	Yes
	SEQUENCY	Yes
Dwell Time		0 to 99 Sec Adjustable
Built-in Buzzer		Yes
Key Lock		Yes

### Remarks

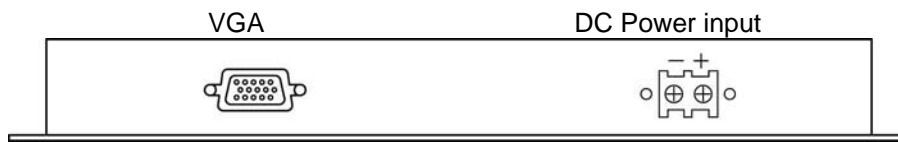
- For more details, please refer to Quad Display User Manual.
- Quad display input is not applicable for SP series.

## 9.7 DC Power Options

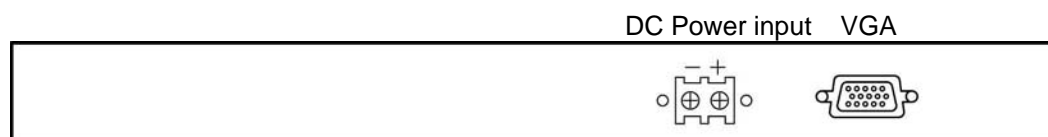


## Chapter 9

**NP615, NP717, NP819 & NP920**  
**SNP717, SNP819 & SNP920**



**NP120 & SNP120**  
**NP115, NP117, NP119, SNP117 & SNP119**  
**NPS115, NPS117 & NPS119**



Model	12V	24V	48V
<b>Input rating</b>			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V
Input current			
- No load	50 mA	50 mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
<b>Output rating</b>			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
<b>Efficiency</b>	84%	85%	85%


### Remarks:

- Package does not include 1 x power cord and 1 x AC power adapter
- The depth of NPS115 / 1417 / 1419 will be extended from 480mm ( 18.9" ) to 530mm ( 20.9" )

## 10.1 Specifications

## Chapter 10

## NPW719, NPW822 &amp; NPW119

Item	Description		
LCD Manufacturer			
Series	NPW119	NPW719	NPW822
Diagonal Size	Wide 19" TFT	Wide 19" TFT	Wide 22" TFT
Max. Resolution	1440 x 990	1440 x 990	1680 x 1050
Brightness (cd/m²)	300	300	300
Color Support	16.7 M	16.7 M	16.7 M
Contrast Ratio (typ.)	1000:1	1000:1	1000:1
Viewing Angle (H/V)	160° x 160°	160° x 160°	170° x 160°
Display Area (mm)	408 x 255	408 x 255	474 x 296
Tr Response Time (ms)	1.3	1.3	3.6
LCD Panel MTBF (hrs)	50,000	50,000	50,000
VGA Signal Input	Analog RGB, 0.7Vp-p		
Sync. Type	Separate H/V, Composite, SOG		
Resolution	720 x 400, 70 Hz		
	640 x 480, 60 / 70 / 72 / 75 Hz		
	800 x 600, 60 / 70 / 72 / 75 Hz		
	1024 x 768, 60 / 70 / 75 Hz		
	1152 x 864, 60 / 70 / 75 Hz		
	1280 x 720, 60 / 70 / 75 Hz		1280 x 720, 60 / 75 Hz
	1280 x 1024, 60 / 70 / 75 Hz		1280 x 1024, 60 / 75 Hz
	1440 x 900, 60 Hz		1680 x 1050, 60 Hz
Plug & Play DDC	EDID 1.3		
Connector	DB-15 connector		
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz		
Power Consumption	Max. 48 Watt, Standby 5 Watt		
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.		
Options			
Graphic Input	DVI-D, BNC, S-Video & Quad display input		
DC Power	DC power input with 12V, 24V, 48V selection		
Touchscreen	-	Resistive & capacitive	
AU	35mm audio plug		
NEMA 4 / IP65	4mm thickness of protective glass		
Environmental			
Operation	0° to 50°C Degree		
Storage	-5° to 60°C Degree		
Relative Humidity	5~90%, non-condensing		
Shock	10G acceleration (11ms duration)		
Vibration	5~500Hz 1G RMS random vibration		

## 10.1 Specifications


## Chapter 10

## NP120

## NPS115, NPS117 &amp; NPS119

## NP115, NP117, NP119

## NP615, NP717, NP819 &amp; NP920

Item	Description			
LCD Manufacturer				
Diagonal Size	15" TFT	17" TFT	19" TFT	20" TFT
Max. Resolution	1024 x 768	1280 x 1024	1280 x 1024	1600 x 1200
Brightness (cd/m²)	250	300	300	300
Color Support	16.2 M	16.7 M	16.7 M	16.7 M
Contrast Ratio (typ.)	700:1	1000:1	1000:1	800:1
Viewing Angle (H/V)	150° x 135°	160° x 160°	160° x 160°	160° x 160°
Display Area (mm)	304 x 228	338 x 270	376 x 301	408 x 306
Tr Response Time (ms)	2	1.3	1.3	1
LCD Panel MTBF (hrs)	50,000	50,000	50,000	50,000
VGA Signal Input	Analog RGB, 0.7Vp-p			
Sync. Type	Separate H/V, Composite, SOG			
Resolution	640 x 400, 70 Hz	-		
	720 x 400, 70 Hz			
	640 x 480, 60 / 70 / 72 / 75 Hz			
	800 x 600, 60 / 70 / 72 / 75 Hz			
	1024 x 768, 60/ 70 / 72 / 75 Hz	1024 x 768, 60 / 70 / 75 Hz		
	-	1152 x 864, 60 / 70 / 75 Hz		
	-	1280 x 720, 60 / 70 / 75 Hz		1280 x 720, 60 / 75 Hz
	-	1280 x 1024, 60 / 70 / 72 / 75 Hz		1280 x 1024, 60 / 70 / 75 Hz
	-	1400 x 1050, 60 Hz		
	-	1600 x 1200, 60 Hz		
Plug & Play DDC	EDID 1.3			
Connector	DB-15 connector			
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz			
Power Consumption	Max. 48 Watt, Standby 5 Watt			
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.			
Regulation Approval	FCC, CE			

*Options*

Graphic Input	DVI-D, BNC, S-Video & Quad display input
DC Power	DC power input with 12V, 24V, 48V selection
Touchscreen	Resistive & capacitive
AU	35mm audio plug
NEMA 4 / IP65	4mm thickness of protective glass

*Environmental*

Operation	0° to 50°C Degree
Storage	-5° to 60°C Degree
Relative Humidity	5~90%, non-condensing

## 10.1 Specifications

## Chapter 9

## SNP120

## SNP117 &amp; SNP119

## SNP717, SNP819 &amp; SNP920

Item	Description		
Form Factor	1U rack mounting on slide-out rails		
Diagonal Size	17" TFT	19" TFT	20" TFT
Resolution	1152 x 900 (Direct)	1152 x 900 (Direct)	1152 x 900 (Direct)
	1280 x 1024 (Native)	1280 x 1024 (Native)	1600 x 1200 (Native)
Brightness (cd/m <sup>2</sup> )	300	300	300
Color Support	16.7 M	16.7 M	16.7 M
Contrast Ratio (typ.)	1000:1	1000:1	800:1
Viewing Angle (H/V)	160° x 160°	160° x 160°	160° x 160°
Display Area (mm)	338 x 270	376 x 301	408 x 306
Tr Response Time (ms)	1.3	1.3	1
LCD Panel MTBF (hrs)	50,000	50,000	50,000
VGA Signal Input	Analog RGB, 0.7Vp-p		
Sync. Type	Separate H/V, Composite, SOG		
Resolution	720 x 400, 70 Hz		
	640 x 480, 60 / 70 / 72 / 75 Hz		
	800 x 600, 60 / 70 / 72 / 75 Hz		
	1024 x 768, 60 / 70 / 75 Hz		
	1152 x 864, 60 / 70 / 75 Hz		
	1280 x 720, 60 / 70 / 75 Hz		1280 x 720, 60 / 75 Hz
	1280 x 1024, 60 / 70 / 72 / 75 Hz		1280 x 1024, 60 / 70 / 75 Hz
	-		1400 x 1050, 60 Hz
	-		1600 x 1200, 60 Hz
Plug & Play DDC	EDID 1.3		
Connector	DB-15 connector		
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz		
Power Consumption	Max. 48 Watt, Standby 5 Watt		
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.		
Regulation Approval	FCC, CE		

*Options*

Graphic Input	DVI-D input
DC Power	DC power input with 12V, 24V, 48V selection

*Environmental*

Operation	0° to 50°C Degree
Storage	-5° to 60°C Degree
Relative Humidity	5~90%, non-condensing
Shock	10G acceleration (11ms duration)
Vibration	5~500Hz 1G RMS random vibration

## 11.1 Troubleshooting

## Chapter 11

### 1. How do I adjust the resolution?

To change monitor resolution, click Start -> Control Panel -> Display. Select Setting tab to adjust the monitor resolution in Desktop Area. The available resolutions, "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", "1280 x 1024", are determined by the display card in your computer.


### 2. Is interference signal appeared on LCD normal when shutting down the computer?

In rare cases, interference may appear on the monitor. This may be caused by signal rate of VGA card and is considered normal. The image quality can be improved by adjusting the phase or pixel rate automatically or manually.

### 3. The membrane power light is not ON

Press the power On / Off on LCD membrane to check if the monitor is in the ON mode.  
Check the power cord is properly connected to the LCD keyboard drawer and power outlet.

### 4. Screen image is not centered or sized properly

Press the  button for two seconds to automatically adjust the image.  
Adjust the H-position and V-position settings via On-screen menu.

## For SP series LCD Drawer

### 1. How can I adjust the monitor resolution to 1152 x 900 for SUN Micro system?

The NS solution LCD keyboard drawer will automatically detect the 1152 x 900 resolution, so no user configuration should be necessary.

### 2. How do I adjust the resolution in MS Windows operation system?

To change monitor resolution, click Start -> Control Panel -> Display. Select Setting tab to adjust the monitor resolution in Desktop Area. The available resolutions, "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", "1280 x 1024", are determined by the display card in your computer.

### 3. Is the LCD keyboard drawer hot-pluggable?

The LCD keyboard drawer is hot-pluggable, but components of connected devices, such as the servers and KVMs, may not be hot-pluggable. We suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD keyboard receives power.

## 12.1 Dimensions

## Chapter 12

**NPW719, NPW822 & NPW119**  
**NP615, NP717, NP819 & NP920**  
**SNP717, SNP819 & SNP920**

Model	Product Dimension (W x D)		Packing Dimension (W x D x H)	Net Weight	Gross Weight
<b>NPW719</b>	480 x 57.5mm x 2.3"	18.9 7U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
<b>NPW822</b>	500.4 x 59.1mm 19.7 x 2.3"	8U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb
<b>NPW119</b>	445 x 650 x 44 mm 17.5 x 25.6 x 1.73 "		581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	13 kg 29 lb	18 kg 40 lb
<b>NP615 series</b>	480 x 52 mm 18.9 x 2"	6U	565 x 406 x 156 mm 22.2 x 16 x 6.1"	6 kg 13 lb	8 kg 18 lb
<b>NP717 series</b>	480 x 57 mm 18.9 x 2.2"	7U	565 x 450 x 156 mm 22.2 x 17.7 x 6.1"	7 kg 15 lb	8.5 kg 19 lb
<b>NP819 series</b>	480 x 57 mm 18.9 x 2.2"	8U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
<b>NP920 series</b>	480 x 67 mm 18.9 x 2.6"	9U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb
<b>SNP717 series</b>	480 x 57 mm 18.9 x 2.2"	7U	565 x 450 x 156 mm 22.2 x 17.7 x 6.1"	7 kg 15 lb	8.5 kg 19 lb
<b>SNP819 series</b>	480 x 57 mm 18.9 x 2.2"	8U	565 x 495 x 156 mm 22.2 x 19.5 x 6.1"	8 kg 18 lb	10 kg 22 lb
<b>SNP920 series</b>	480 x 67 mm 18.9 x 2.6"	9U	565 x 539 x 156 mm 22.2 x 21.2 x 6.1"	12 kg 26 lb	15 kg 33 lb

## 12.1 Dimensions

## Chapter 12

**NP120**

**SNP120**

**NP115, NP117, NP119**

**SNP117 & SNP119**

**NPS115, NPS117 & NPS119**

Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
<b>NP120 series</b>	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	14 kg 31 lb	19 kg 42 lb
<b>SNP120 series</b>	442 x 650 x 44 mm 17.4 x 25.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	14 kg 31 lb	19 kg 42 lb
<b>NP115 series</b>	442 x 550 x 44 mm 17.4 x 21.6 x 1.73"	581 x 705 x 175 mm 22.9 x 27.8 x 6.9"	10 kg 22 lb	15 kg 33 lb
<b>NP117 series</b>	446 x 600 x 44 mm 17.6 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	12 kg 26 lb	17 kg 37 lb
<b>NP119 series</b>	446 x 600 x 44 mm 17.6 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	13 kg 29 lb	18 kg 40 lb
<b>SNP117 series</b>	446 x 600 x 44 mm 17.6 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	12 kg 26 lb	17 kg 37 lb
<b>SNP119 series</b>	446 x 600 x 44 mm 17.6 x 23.6 x 1.73"	581 x 755 x 172 mm 22.9 x 29.7 x 6.8"	13 kg 29 lb	18 kg 40 lb
<b>NPS115 series</b>	442 x 440 x 44 mm 17.4 x 17.3 x 1.73"	584 x 601 x 169 mm 23 x 23.7 x 6.7"	10 kg 22 lb	15 kg 33 lb
<b>NPS117 series</b>	446 x 480 x 44 mm 17.6 x 18.9 x 1.73"	584 x 641 x 169 mm 23 x 25.2 x 6.7"	12 kg 26 lb	17 kg 37 lb
<b>NPS119 series</b>	446 x 480 x 44 mm 17.6 x 18.9 x 1.73"	584 x 641 x 169 mm 23 x 25.2 x 6.7"	13 kg 29 lb	18 kg 40 lb

The company reserves the right to modify product specifications without prior notice and assumes no responsibility for any error which may appear in this publication.

All brand names, logo and registered trademarks are properties of their respective owners.

Copyright 2009 i-Tech Company LLC. All rights reserved.



i-Tech Company LLC

TOLL FREE: (888) 483-2418 • EMAIL: [info@itechlcd.com](mailto:info@itechlcd.com) • WEB: [www.iTechLCD.com](http://www.iTechLCD.com)